



Bharat Heavy Electricals Limited

(High Pressure Boiler Plant)

Tiruchirappalli – 620014, TAMIL NADU, INDIA

MATERIALS MANAGEMENT / CAPITAL EQUIPMENT

An ISO 9001
Company

ENQUIRY – Corrigendum 1	Phone: +91 431 257 79 38 Fax : +91 431 252 07 19 Email : tvenkat@bheltry.co.in Web : www.bhel.com
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NIT No. 9108	Enquiry Number: 2621000141	Enquiry Date: 11.11.2010	Due date for submission of quotation: 11.12.2010
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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

Item Description: MPI Testing Equipment: 2 Items

Item	Description	Quantity	Delivery (Item required at BHEL on)
10	MPI Testing Equipment – 1500 A (3 Nos.) and 2000 A (4 Nos.) as per the technical specification, general guidelines instruction & Commercial conditions applicable (to be downloaded from web site www.bhel.com or http://tenders.gov.in)	7 Nos.	30.09.2011
20	MPI Testing Equipment – 1500 A (7 Nos.) and 2000 A (7 Nos.) as per the technical specification, general guidelines instruction & Commercial conditions applicable (to be downloaded from web site www.bhel.com or http://tenders.gov.in)	14 Nos.	31.03.2011

The sl. No. 20 is added and the specification (6 pages) has been uploaded. Please quote for both the items separately. The item 10 is meant for our new plant at Thirumayam and item No. 20 is for our plant at Trichy.

All other terms and conditions and specifications as published in the NIT 9108 remains unaltered.

Confirmation of acceptance for BHEL commercial terms & conditions and Price Bid formats have been posted in BHEL Corporate web site www.bhel.com or from the Government tender website <http://tenders.gov.in> (public sector units > Bharat Heavy Electricals Limited page) under Enquiry reference “2621000141”.

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
Sr. Manager / MM / Capital Equipment

NON DESTRUCTIVE TESTING /QUALITY

The BIDDER / VENDOR has to necessarily provide the following details, for making an assessment

SPECIFICATION FOR AC/HWDC PORTABLE MAGNETIC PARTICLE TESTING EQUIPMENT WITH DEMAGNETSATION FACILITY

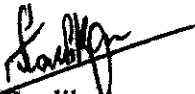
S. No.	PARTICULARS	BHEL SPECIFICATIONS	Bidder's OFFER [With Complete Technical Details]
1.0	Application	For Magnetic particle examination of butt, nozzle, fillet welds using prods. Maximum prod spacing used for examination will be 200mm (8") and also to use for demagnetization requirements.	
2.0	Input supply & cable:	230V/50Hz /30Amps with Neon pilot lamp. Flexible Input power supply cable-20Meter long with multi strand copper conductor with 30 Amps single phase metal socket.	
3.0	Maximum output	1500 Amperes at the end of 2 x 5 meter cable	
4.0	HWDC out put	Supplier to specify for 50% duty cycle and 2x5 meter cable	
5.0	Max. ON & OFF time	Adjustable to at least 0-60 seconds (Timer control)	
6.0	Cable size	Shall not be more than 120 sq mm and shall be of Copper conductor, with insulation	
7.0	Current control	Step less , Solid state SCR control using Thyristors	
8.0	Ammeter	AC and HWDC Ammeters	
9.0	Trigger control at prod side	24 V or less	
10.0	Trolley &Weight of equipment	Light weight for easy mobility. Suitable portable Transport trolley to accommodate and move 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.	
11.0	Facility for Demagnetization	Control to be provided	
12.0	Unit Hardware	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 these parts are not flimsy and are reliable ,trouble free for shop floor conditions. All electrical /electronic components shall be of high quality and are reliable, trouble free for shop floor conditions	
13.0		Supplier to specify the following for their model	
	KVA rating		
	class of insulation-	Class F or better	
	outlet for inspection lamp(24 V)		
	Automatic over load protection		
	Air circulation		

	Over heat protection		
	Dimensions of equipment		
	Circuit diagrams to evaluate the offers.		

Scope of Supply

Sl. No.	Description	Quantity
1	Portable Magnetic particle unit (1500 Amps) conforming to our above specifications and required equipment performance with <ol style="list-style-type: none"> a. Magnetizing Copper Cables 2 x 5 metre long with cable lugs on unit side and connectors on prod side b. Individual contact copper prods with standard length. c. Trigger switch in one prod with 5 metre remote cable. d. Standard Tool Kit with adjustable spanner, file, Screw driver, Tester, etc 	7 No
2	System performance test plate with EDN notch in wooden carrying case with Dimensional Report.	7 No
3	Gauss meter Range (0-20) with calibration Certificate.	3 No
4	Digital Lux meter (To Measure upto 2000 Lux) with calibration Certificate.	2 No
5	Digital Black light meter (in Micro Watts) with calibration certificate	2 No
6	Ultraviolet inspection black light with built in cooling fan with integral filter (minimum output of 1500microwatts) with calibration certificate	2 No
7	ASTM Pie gauge Field indicator: As per E 1444 -05 with Dimensional Report	4 No
8	ANSI Ketos steel tool Ring with Copper conductor of diameter 25mm and length 300mm or 400mm (As per E 1444 -05) with Dimensional Report.	1 No
9	Rubber Blower medium size (Puffer bulb to apply Dry method powders on the job)	15 No
	SPARES	
10	Prod handles assembly (without trigger switch) connected with copper rod.	10 Set
11	Prod handles assembly (with trigger switch) connected with copper rod along with 5 meter long trigger cable.	10 Set
12	Magnetizing copper cables 2 x 5 metre long with connectors on both ends.	4 Pairs
13	Ammeter AC	7 No
14	Ammeter DC	14 No
15	Current control PCB	5 No
16	Diodes	10 No
17	Power control PCB	5 No
18	Thyristor	7 No
19	Shunt for DC Ammeter	2 No
20	Ultraviolet inspection black light Bulbs.	4 No

21	Pre-dispatch inspection & free of cost training at Suppliers works	Supplier to specify
22	Commissioning of the equipment to be done by the vendor at BHEL free of cost	Supplier to specify
23	Performance prove out at BHEL	Supplier to specify
24	Operation and Maintenance manual including Complete electrical circuit diagram with Bill of Material giving specification & make of components used. Trouble shooting information. Preventive Maintenance check lists.PCB Circuit diagram. Complete specification of the equipment.	3 Sets of Hard copies and 1 set of soft copy in CD for each unit
25	Documentation: (Applicable to specification) 1) Calibration for equipment & spare Ammeters (ASTM E709 with calibration certificate from local national lab). 2) Test report for internal circuit check (verification) 3) Test report for internal short circuit check. (Verification) 4) Dimensional report for Magnetic particle field indicator (ASTM E 1444) 5) Dimensional report for system performance test plate. (Verification).	Supplier to specify
26	Warranty.(one year from the date of commissioning)	Supplier to specify
27	Annual Maintenance Contract(AMC)	Supplier to quote for AMC at BHEL Trichy works



R.J. Pardikar
AGM/NDTL

R.J. Pardikar
Additional General Manager
Non - Destructive Testing
Bharat Heavy Electricals Ltd.,
Trichy - 620 014

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2.0	Input supply & cable:	415V/50Hz /2 phase/30Amps with Neon pilot lamp. Flexible Input power supply cable-20Meter long with multi strand copper conductor with 30 Amps single phase metal socket.	
3.0	Maximum output	2000 Amperes at the end of 2 x 10 metre cable	
4.0	HWDC out put	Supplier to specify for 50% duty cycle and 2x10 metre cable	
5.0	Max. ON & OFF time	Adjustable to at least 0-60 seconds (Timer Control)	
6.0	Cable size	Shall not be more than 120 sq mm and shall be of Copper conductor, with insulation	
7.0	Current control	Step less , Solid state SCR control using Thyristors	
8.0	Ammeter	AC and HWDC Ammeters	
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	Air circulation		
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	Dimensions of equipment		
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2	System performance test plate with EDN notch in wooden carrying case with Dimensional Report	7 No
3	Gauss meter Range (0-20) with calibration Certificate.	3 No
4	Digital Lux Meter(to measure up to 2000 Lux) with calibration Certificate.	2 No
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6	Ultraviolet inspection black light with built in cooling fan with integral filter (minimum output of 1500microwatts)with calibration certificate.	2 No
7	ASTM Pie gauge Field indicator: As per E 1444 -05 with Dimensional Report	4 No
8	ANSI Ketos steel tool Ring with Copper conductor of diameter 25mm and length 300mm or 400mm (As per E 1444 -05) with Dimensional Report.	2 No
9	Rubber Blower medium size (Puffer bulb to apply Dry method powders on the job	15 No
	SPARES	
10	Prod handles assembly (without trigger switch) connected with copper rod.	10Set
11	Prod handles assembly (with trigger switch) connected with copper rod along with 10 metre long trigger cable.	10Set
12	Magnetizing copper cables of length 2x10 meters with connectors on both ends	5 Pair
13	Ammeter AC	7 No
14	Ammeter DC	14 No
15	Current control PCB	5 No
16	Diodes	10 No
17	Power control PCB	5 No
18	Thyristor	7 No

19	Shunt for DC Ammeter		2 No
20	Ultraviolet inspection black light Bulbs.		4 No
21	ASTM Centrifuge tube 100ml stand		3 No
22	Pre-dispatch inspection & free of cost training at Suppliers works.	Supplier to specify	
23	Commissioning of the equipment to be done by the vendor at BHEL free of cost.	Supplier to specify	
24	Performance prove out at BHEL	Supplier to specify	
25	Operation and Maintenance manual including Complete electrical circuit diagram with Bill of Material giving specification & make of components used. Trouble shooting information. Preventive Maintenance check lists.PCB Circuit diagram. Complete specification of the equipment.	3 Sets of Hard copies and 1 set of soft copy in CD for each unit	
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