



An ISO 9001  
Company

## Bharat Heavy Electricals Limited

(High Pressure Boiler Plant)

Tiruchirappalli – 620014, TAMIL NADU, INDIA

CAPITAL EQUIPMENT / MATERIALS MANAGEMENT

<b>ENQUIRY</b>	Phone: +91 431 257 7653 Fax : +91 431 257 6826 Email : <a href="mailto:skaruna@bheltry.co.in">skaruna@bheltry.co.in</a> Web : <a href="http://www.bhel.com">www.bhel.com</a>
<b>NOTICE INVITING TENDER</b>	

<b>TWO PART BID</b>	<b>Enquiry Number:</b>	<b>Enquiry Date:</b>	<b>Due date for submission of quotation:</b>
Tender to be submitted in two Parts	<b>2631500023</b>	<b>09.10.2015</b>	<b>02.11.2015</b>

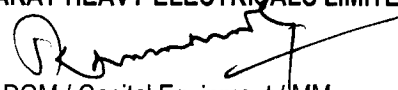
You are requested to quote the Enquiry number date and due date in all your correspondence. This is only a request for quotation and not an order.  
Please note that under any circumstances both delayed offer and late offers will not be considered. Hence vendors are requested to ensure that the offer is reaching physically our office before 14.00 hrs on the Date of tender opening.

Item	Description	Quantity
10	Gouging Machine 800A 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> )	2.00 Nos.

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

1. Delivery required 3 Months from the date of purchase order.
2. Erection & Commissioning period required 1 Week from the date of intimation by BHEL to vendor for deputation of their Engineers for E&C.
3. Compliance Form No: TRY/IND/08 to be filled and enclosed along with the offer failing which, the offer will not be considered for evaluation.
4. 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) 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 above Enquiry reference.

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 <b>BHARAT HEAVY ELECTRICALS LIMITED</b>  DGM / Capital Equipment / MM
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**S. KARUNANIDHY**  
Dy. General Manager  
Capital Equipment / MM  
BHEL, Tiruchirappalli - 620014

**MANUAL AIR ARC GOUGING POWERSOURCE (800A @ 60% Duty Cycle), Qty: 2 nos.****PART A****SECTION 1: Qualifying Criteria**

The BIDDER has to compulsorily meet the Qualifying criteria indicated in SECTION 1 to get qualified. Otherwise the technical offer will not be considered.

<b>S. No.</b>	<b>REQUIREMENTS</b>	<b>VENDOR'S RESPONSE</b>
1.1	The BIDDER shall have a minimum of FIVE Years of Continuous Experience in the Design, Manufacture & Supply of Heavy Duty Air Arc Gouging Power Sources. Vendor shall indicate the actual no. of years of experience in the field.	
1.2	Only those vendors (OEMs) should quote, who have commissioned in the last 2 years, at least 4 Nos. of "Manual Air Arc Gouging Power Source (Rectifier/Diode type) with rating of 800A - 60% Duty Cycle" or above. Vendor shall indicate the actual no. supplied.	
1.3	Number of "Manual Air Arc Gouging Power Source" supplied & commissioned till date.	
1.4	Year of Launch of the Offered Model in this tender.	
1.5	At least one Performance Certificate from any of the customers for satisfactory performance of the quoted model against this tender, for a minimum period of one year from the date of commissioning (as on original date of opening of tender), supplied in the last five years.	
1.6	Servicing facility to be available in India. Details on Service-After-Sales Set-Up in India (Address of Agents / Service Centres), to be furnished compulsorily.	
1.7	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.	

**SECTION 2**

The BIDDER / VENDOR is requested to provide the following information:

<b>S. No.</b>	<b>REQUIREMENTS</b>	<b>VENDOR'S RESPONSE</b>
2.1	Comprehensive Details, on Performance Testing of Air-Arc Gouging Machines carried out at the Factory, to be furnished with the Technical Offer.	
2.2	A complete reference list of Customers shall be furnished (preferably of Heavy Engg. Companies) to whom such offered model has been supplied in the last ten years with PO details, Qty., Year of commissioning with contact details of the customers.	
2.3	Any Additional Data to supplement the manufacturing capability of the BIDDER.	

**SECTION 3**

The BIDDER to note:

<b>S. No.</b>	<b>PARTICULARS</b>	<b>VENDOR'S RESPONSE</b>
3.1	The BIDDER shall submit the offer in <b>Two Parts</b> – 1. Technical [with PART A & PART B] & 2. Commercial and Price Bid.	
3.2	The VENDOR'S RESPONSE 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 Technical Offer shall be supported by Product Catalogue and Data Sheets in original and complete technical details / literature on the quoted models of Gouging Power sources.	
3.5	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.	

**MANUAL AIR ARC GOUGING POWERSOURCE (800A @ 60% Duty Cycle), Qty: 2 nos.****Part B: Technical Specification**

S. No.	BHEL SPECIFICATION	BIDDER'S OFFER
1.0	<b>Application:</b> The power source shall be suitable for Manual Air Arc Gouging Operations using Copper Coated Carbon Electrodes of 6mm and 9mm Diameter for continuous duty operation.	
2.0	<b>Power Source Features</b>	
2.1	Type: The power source shall be Rectifier or Diode Based [Inverter based design is not preferred from the point of view of application and maintenance cost.] working in DCEP and DCEN modes of operations.	
2.2	Rating: 800 Amps @ 60 % Duty Cycle.	
2.3	Current Range: 50 to 800 Amps with Step less Variation continuously adjustable.	
2.4	Open Circuit Voltage: Minimum 75 Volts	
2.5	Voltmeter & Ammeter: Factory installed Ammeter & Voltmeter on front panel with easy removal and replacement (i.e., without lifting the top cover of the Welding Power source) for periodic meter calibration.	
2.6	Gouging Torch of suitable rating with around 5m long cable, with one end connected to the Power source and the free end provided with a female Connector to connect to the male Connector of the Manual Gouging Electrode Holder.	
2.7	Return Current Cable around 5m in length, with one end connected to the Power source and the other end provided with a Screw Type Earth Clamp.	
2.8	Input Power Supply: 415 ± 10% V AC, 3 Phase, 50 ± 3% Hz, 3 Wire System with a fourth wire for earthing.	
2.9	Insulation Class "H". Vendor to confirm	
2.10	Ingress Protection: IP23. Vendor to confirm	
2.11	Under-Carriage with hard rubber lined wheels for portability of the power source by manual pushing.	
2.12	Machine Cooling: The power source shall feature a forced air cooling system with two fans of suitable rating, to withstand the continuous gouging operation in the peak ambient conditions.	

S. No.	BHEL SPECIFICATION	BIDDER'S OFFER
2.13	Lifting Hook: Four numbers of lifting hook are to be provided at suitable locations, for lifting the power source by EOT Crane Hoist.	
2.14	Ambient Conditions: Temperature + 50 °C ; Humidity 85% (maximum), both not occurring simultaneously.	
2.15	Functional / Elemental Design Protection / operator safety a. Transformer Design: The primary and secondary coils of the power transformer shall be of copper windings. All the transformers shall be of 'module' design, can be easily separated from the main frame of the machine, during maintenance. b. Inbuilt Protection for Thermal/ Overload/ Short-Circuit. c. Machine Design to ensure proper earthing for the machine and its peripherals. d. Protection against electric shock from input supply for ensuring operator safety. e. VRD (Voltage Reducing Device) shall be provided to reduce the OCV to a safer value when Gouging operation is not carried out for a specified time. f. The following indications / features shall be provided In the front panel of the machine: <ul style="list-style-type: none"> <li>• 'Main ON' lamp</li> <li>• Indication lamp for R,Y &amp; B phase supply and major alarms like Overload, Over temperature, etc. (Vendor has to provide the details of the features available in the offered model)</li> <li>• 3" dia 'POT' shall be provided for welding current adjustment.</li> </ul>	
2.16	Vendor to specify the weight of the machine	
2.17	Vendor to specify the Make and Model no. (Metallic name plate of the machine shall also include details like name of manufacturer, Serial no, Year of Mfg. input power in kVA, input voltage, No. of phase, operating frequency, weight of the unit etc.)	
<b>3.0</b>	<b>Remote Control Unit</b>	
3.1	Application: Remote control unit shall be provided for Step less Variation of output current from a distant work place, in addition to that provided in the front panel of the gouging power source.	

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3.2	<p>Pattern / Type: Hand operated type Remote control unit with 3” dia. knob and around 15m length cable (protected with a sheathing - preferably metallic braided, to withstand rough usage at shop floor and shall be windable) with quick-fix end connectors shall be provided.</p>	
4.0	<p><b>Spares:</b> Spares listed below shall be compulsorily quoted, item wise (required for two years of operation on THREE shift basis):</p> <ol style="list-style-type: none"> <li>a. Diodes / Rectifiers as per the case</li> <li>b. All type of Fuses</li> <li>c. Control-Transformers</li> <li>d. Printed Circuit Boards / PCBs – if used (all types coming in the electrical circuit)</li> <li>e. Variable Resistor</li> <li>f. Switches</li> <li>g. Cooling Fan</li> <li>h. Ammeter &amp; Voltmeter</li> <li>i. Potentiometer Knobs, etc.</li> <li>j. Indicator Bulbs</li> <li>k. Remote control spares</li> </ol>	
5.0	<b>O &amp; M Manuals</b>	
5.1	<p>Operation &amp; Maintenance Manual (Service Manual) shall contain</p> <ol style="list-style-type: none"> <li>a. general circuit diagrams with Bill Of Material and ratings</li> <li>b. details on PCBs, showing various electronic elements and their specifications and ratings</li> <li>c. Trouble shooting chart, etc.</li> </ol>	
5.2	Hard Copies: 3 (Three) Copies in Original for Each Machine in English.	
5.3	One soft copy in CD-ROM or pen drive is to be given containing the details as above.	
6.0	<b>Pre Despatch Inspection:</b> The equipment shall be offered for inspection by BHEL at the supplier's works for performance evaluation (by conducting gouging trials) prior to despatch.	
7.0	<b>Commissioning:</b> Commissioning and performance prove out of the offered equipment at BHEL works shall be done by the supplier's Engineer.	
8.0	<b>Training:</b> The Supplier's Service Engineer shall give training in the Operation and Maintenance (mainly on electric/electronic troubleshooting) of the Machine to BHEL Staff, during commissioning of the Welding Machines.	

<b>S. No.</b>	<b>BHEL SPECIFICATION</b>	<b>BIDDER'S OFFER</b>
<b>9.0</b>	<b>Guarantee:</b> Performance guarantee to be given for a minimum period of 12 months from the date of commissioning of the equipment at BHEL works or 18 months from the date of despatch whichever is earlier.	