



# Bharat Heavy Electricals Limited

(High Pressure Boiler Plant)

Tiruchirappalli – 620014, TAMIL NADU, INDIA

CAPITAL EQUIPMENT/ MATERIALS MANAGEMENT

An ISO 9001  
Company

<b>ENQUIRY</b>	Phone: +91 431 257 7653 Fax : +91 431 252 0031 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>2631600049</b>	<b>09.08.2016</b>	<b>07.09.2016</b>

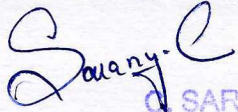
You are requested to quote the Enquiry number, date and due date in all your correspondences. This is only a request for quotation and not an order.  
 Please note that under any circumstances both delayed offer and late offers will not be considered. Hence vendors are requested to ensure that the offer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

Item	Description	Quantity
10	Hybrid Surge(Voltage/Current) Generator as per the technical specification, BHEL commercial terms & 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. Compliance Form to be duly filled and enclosed along with your offer, failing which the offer will not be considered for evaluation.
2. 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 including bank guarantee formats and list of consortium banks, commercial compliance form 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 "2631600049".**

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, <b>For BHARAT HEAVY ELECTRICALS LIMITED</b>  <b>SARANYA</b> Senior Engineer MM / Capital Equipment BHEL / Tiruchirappalli - 620 014.
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## HYBRID SURGE (VOLTAGE/CURRENT) GENERATOR, Qty. – 1 no.

### PART – A

S. No.	BHEL SPECIFICATION	BIDDER / VENDOR'S RESPONSE
1.0	<b>Qualifying Criteria:</b> The BIDDER has to compulsorily meet the	Qualifying criteria to get qualified otherwise the technical offer will not be considered.
1.1	BIDDER / OEM to provide the Profile of their Company.	
1.2	The BIDDER / OEM shall have a minimum of last five Years of Continuous Experience in the field of Design, Manufacture and Supply of HYBRID SURGE (VOLTAGE/CURRENT) GENERATOR. Vendor may indicate the actual number of years of experience in the field.	
1.3	Only those vendors (OEMs), who have supplied and commissioned at least 2 numbers of HYBRID SURGE (VOLTAGE/CURRENT) GENERATOR similar to the item specified under Part B, in the last 5 years (as on original date of opening of Tender) should quote.	
1.4	Vendor has to submit at least one Performance Certificate from their customers, for satisfactory performance of HYBRID SURGE (VOLTAGE/CURRENT) GENERATOR quoted against this enquiry, for a minimum period of one year from the date of commissioning (as on original date of opening tender). For obtaining the Performance Certificate, a suggestive format is provided.	
1.5	BHEL reserves the right to verify the information provided by the vendor. In case the information provided by the vendor is found to be false / incorrect, the offer shall be rejected.	
1.6	Details on SERVICE-AFTER-SALES set-up in India, Contact details (Name, Phone number, email ID) including the Address of Agents / Service Centres in India to be provided.	
2.0	<b>Information to be provided by the vendor</b>	
2.1	Year of launch of the model quoted against this enquiry	
2.2	Number of HYBRID SURGE (VOLTAGE/CURRENT) GENERATORS supplied and commissioned till date with details.	
2.3	The BIDDER / VENDOR to furnish Reference list of customers viz. Name and address of the customers or companies where the quoted model of equipment is installed, month / year of commissioning and application of the equipment supplied.	
2.4	The BIDDER shall give details about supply of similar Hybrid Surge Generator to BHEL units if any with Make, Model and Year of Supply & Commissioning etc.	

S. No.	BHEL SPECIFICATION	BIDDER / VENDOR'S RESPONSE
2.5	Details on Standards followed in Design and Testing of HYBRID SURGE (VOLTAGE/CURRENT) GENERATOR.	
2.6	Details of Quality System followed (Furnish the salient aspects of the Quality Assurance System followed)	
2.7	BIDDER has to indicate the Country of Origin for the supply of equipment.	
2.8	Any Additional Data to supplement the manufacturing capability of the BIDDER for the subject equipment.	
<b>3.0</b>	<b>Vendor to note the following:</b>	
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 VENDOR's RESPONSE against each clause in PART A & B of the offer should be filled 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 and complete technical details / literature on the quoted model.	



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

Suggestive Format of Performance Certificate:

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(On Customer's letter head)  
**PERFORMANCE CERTIFICATE**

- 1 Supplier / Make of the Hybrid Surge Generator :
- 2 Model :
- 3 Month & Year of Commissioning :
- 4 Quantity :
- 5 Machine details :
- 6 Performance of the HYBRID SURGE GENERATOR : Satisfactory / Not Satisfactory  
(Strike off whichever is not applicable)
- 7 After sales service : Satisfactory / Not Satisfactory  
(Strike off whichever is not applicable)
- 8 Any Other remarks :

Date:

Signature & Seal of the Authority  
Issuing the Performance



## HYBRID SURGE (VOLTAGE/CURRENT) GENERATOR, Qty. – 1 no.

### PART B - Technical Specification

S. No.	Description	Specification	BIDDER'S OFFER
1.0	<b>General Specification:</b> Hybrid voltage & current surge generator confirming to IEC/EN 61000-4-5 standard.		
2.0	<b>Voltage &amp; Current Surge</b>		
2.1	Type: Combination wave Generator. Vendor to specify		
2.2	Voltage (O.C.)	0.5 – 4kV $\pm$ 10% or better	
2.3	Rise time	1.2 $\mu$ s $\pm$ 30%	
2.4	Decay time to half value	50 $\mu$ s $\pm$ 20%	
2.5	Current (S.C.)	Max. 2.0 kA $\pm$ 10% or better	
2.6	Rise time	8 $\mu$ s $\pm$ 20%	
2.7	Decay time to half value	20 $\mu$ s $\pm$ 20%	
2.8	Polarity	Positive/negative	
2.9	Counter	1 - 10,000 or endless, adjustable	
3.0	<b>Trigger</b>		
3.1	Pulse trigger	Automatic manual, external	
3.2	Synchronization	0°- 359°, resolution 1°	
3.3	Repetition rate	10 - 999 s or better	
4.0	<b>Interface</b>		
4.1	Display	3 digits or better	
4.2	PC interface	RS232 , etc.	
4.3	Other optional interfaces	BNC connector for voltage and current	
4.4	Functions	Provision to vary idle voltage, phase angle, number of pulses, periods, etc.	
4.5	Memory	Provision to store at least 10 test setups	
4.6	DUT supply	AC 230V/16A: 50/60 Hz DC 120V/16 A or better	



S. No.	Description	Specification	BIDDER's OFFER
<b>5.0</b>	<b>Coupling &amp; Decoupling network</b>		
5.1	In-built or external	Vendor to specify. Quote with split price in case of external coupler	
5.2	Nominal voltage	230 V / 50–60 Hz or 220 V DC or better	
5.3	Nominal current	8 A or more AC or DC	
5.4	Sym. Coupling	L - N : 18 $\mu$ F.	
5.5	Asym. Coupling	L - PE, N – PE : 9 $\mu$ F + 10 $\Omega$	
<b>6.0</b>	<p><b>Accessories:</b> Bidder shall provide the list of all essential and optional accessories which are required to enhance the operating efficiency and features of the offered equipment. Quote with split price for optional accessories, if applicable. An indicative list is given below:</p> <ul style="list-style-type: none"> <li>• Power cords</li> <li>• Probes</li> <li>• Interface cables</li> <li>• 3 phase coupling network 8A or more (optional)</li> <li>• 2 or more data lines; surge of 4KV or more (optional)</li> <li>• PC software for controlling the equipment (optional)</li> </ul>		
<b>7.0</b>	<b>Spares</b>	List of spares required for 2 years of trouble free operation, to be quoted along with the offer. Also the list of consumables, if any, shall be supplied along.	
<b>8.0</b>	<b>Manuals</b>	Two sets of User manuals, Service Manuals, O&M Manuals, etc. as hard copies and one copy in CD or pen drive.	
<b>9.0</b>	<b>Test Report</b>	As applicable to system / instrument requirement, traceable to Indian standard.	
<b>10.0</b>	<b>Calibration Certificate</b>	Along with the original calibration certificates, complete details of calibration procedures & instructions, applicable standards, etc. shall be provided.	
<b>11.0</b>	<b>Pre-Dispatch Inspection</b>	The equipment shall be offered for inspection by BHEL prior to dispatch at Vendor's works.	
<b>12.0</b>	<b>Installation &amp; commissioning</b>	Commissioning, prove out and demonstration of all the features of the offered equipment at BHEL works shall be carried out by the supplier's representative.	

S. No.	Description	Specification	BIDDER's OFFER
13.0	Training	The Service Engineer has to impart training to BHEL Engineers on the Operation and Maintenance of the equipment and accessories during commissioning.	
14.0	Performance Guarantee period	The equipment shall be guaranteed for a period of <b>12 months</b> from the date of commissioning at BHEL or <b>18 months</b> from dispatch whichever is earlier.	



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