

**BHARAT HEAVY ELECTRICALS LIMITED
ELECTROPORCELAINS DIVISION, BANGALORE-12**

**TENDER FOR THE SUPPLY OF ELECTRICAL PARAMETERS TEST SET
GENERAL TERMS & CONDITIONS**

TENDERS SHOULD BE SUBMITTED IN TWO PARTS

PART-A: TECHNO-COMMERCIAL BID	PART-B: PRICE BID
TENDER ISSUED ON	28.10.2013
TENDER DUE ON	19.11.2013

THE OFFER SHOULD BE SUBMITTED IN TWO SEPARATE SEALED COVERS SUPER SCRIBING TENDER NUMBER & DUE DATE ADDRESSED TO:

**SR. DY. GENERAL MANAGER / MM
BHARAT HEAVY ELECTRICALS LTD
ELECTRO PORCELAINS DIVISION
PROF, C N R RAO CIRCLE
PB NO: 1245, SCIENCE INSTITUTE POST
BANGALORE – 560 012**

SO AS TO REACH HERE WITHIN 2.00 P.M. ON THE DUE DATE AND THE TENDERS WILL BE OPENED AT 2-30 P.M. ON THE SAME DATE IN THE PRESENCE OF THOSE VENDORS OR THEIR AUTHORISED REPRESENTATIVES WHO WISH TO BE PRESENT. THE DUE DATE MAY BE ALTERED IN CASE OF INSUFFICIENT RESPONSE FROM VENDORS OR URGENCY OR ANY OTHER REASONS DEEMED VALID. RE-FLOATING ALSO MAY BE RESORTED TO WITH OR WITHOUT OPENING THE RECEIVED RESPONSES UNDER THE AFORESAID CIRCUMSTANCES.

THE OFFER SHALL BE IN TWO PARTS- PART-A TECHNO-COMMERCIAL AND PART-B- PRICE. EACH PART SHALL BE PUT IN A SEPARATE SEALED COVER AND THE COVER SHOULD HAVE THE CORRESPONDING PART NAME, SUBJECT OF TENDER AND DUE DATE WRITTEN ON IT. IF BOTH PARTS ARE FOUND IN OPENED CONDITION IN A SINGLE SEALED COVER, THE SAME OFFER WILL BE SUMMARILY REJECTED. ONLY THE TECHNO-COMMERCIAL PART WILL BE OPENED ON THE DUE DATE. THE TENDERS MEETING OUR TECHNO-COMMERCIAL REQUIREMENTS WILL BE CONSIDERED FOR PRICE BID OPENING AT A LATER DATE FOR WHICH ELIGIBLE VENDORS WILL BE INTIMATED IN DUE COURSE. VENDORS WILL BE GIVEN DUE OPPORTUNITY TO COMPLY WITH BHEL REQUIREMENTS IN A TIME FRAME IN CASE THERE IS ANY NON-COMPLIANCE IN THE ORIGINAL QUOTE.

I. TECHNO-COMMERCIAL CONDITIONS SHALL INTERALIA CONTAIN THE FOLLOWING:-

COMPLETE TECHNICAL OFFER INCLUDING DETAILED SPECIFICATIONS, DRAWINGS, CATALOGUES AND TEST REPORTS ETC., AS REQUIRED TOGETHER WITH EXPERIENCE LIST TO BE FURNISHED. IN ADDITION TO THIS THE SUPPLIER SHOULD ALSO COMPLETE TECHNICAL/COMMERCIAL REQUIREMENT IN THE ATTACHED TABLE FOR EVALUATION, IF PROVIDED. .

Location of tender box : Tender box named BHEL- EPD kept in reception at the front main gate.

Bharat Heavy Electricals Limited
(A Govt. of India Undertaking)
Prof. C.N.R. Circle, Science Institute Post
Malleswaram, Bangalore: 560 012

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II. COMMERCIAL ASPECTS COVERING:

- SCOPE OF SUPPLY :
- TERMS OF PAYMENT :
- MODE OF PAYMENT :
- DELIVERY TERMS :
- GUARANTEE / WARRANTY OF THE EQUIPMENT INCLUDING BOUGHT OUT ITEMS :
- AFTER SALES SERVICE :
- PACKING& FORWARDING
- TRANSIT INSURANCE
- APPROX SIZE OF THE PACKED MATERIALS AND VOLUME
- LIST OF ALL BOUGHT ITEMS AND MAKES
- VALIDITY OF THE BID

III. COMPANY PROFILE:

PARTIES SHOULD BE REGISTERED WITH THE CONCERNED EXCISE & SALES TAX AUTHORITIES AND SHOULD QUOTE RELEVANT REGISTRATION NO. IN THE OFFER. RELEVANT REGISTRATION CERTIFICATE COPIES MUST BE ENCLOSED. AUDITED FINANCIAL RESULTS OF PREVIOUS 2 FINANCIAL YEARS SHOULD BE FURNISHED.

IV. DELIVERY:

EARLIEST POSSIBLE DELIVERY TO BE CLEARLY SPECIFIED IN THE OFFER. THE VENDOR MAY ALSO QUOTE THE EARLIEST DELIVERY PERIOD FOR MATERIAL DELIVERY AND COMMISSIONING PERIOD. THE COMMISSIONING PERIOD IS TO RECKON FROM DATE OF HANDING OVER OF SITE TO VENDOR BY BHEL. OTHERWISE, WHERE ERECTION AND COMMISSIONING BY THE VENDOR IS INVOLVED THE SUCCESSFUL COMMISSIONING DATE WILL BE RECKONED AS THE DELIVERY DATE.

IV. DELIVERY TERM:

FOR BHEL-EPD STORES. UNLOADING TO BHEL

V. VALIDITY OF THE OFFER:

90 DAYS FROM DATE OF OPENING OF TECHNO-COMMERCIAL BID, EXTENDABLE TO A MUTUALLY AGREED PERIOD.

VI. PRICE IMPACT:

IN CASE, OUT COME OF TECHNO-COMMERCIAL DISCUSSION HAS ANY PRICE IMPLICATION, ONLY CORRESPONDING PRICE IMPACT IS TO BE SUBMITTED BY THE VENDOR IN A SEALED COVER WITHIN THE SPECIFIED DATE, IN THE EVENT OF OPTING TO REVISE AND SUBMIT THE LATEST PRICEBID, ONLY SUCH REVISED PRICE BID WILL BE OPENED ON THE SPECIFIED DATE.

TENDER FOR THE SUPPLY OF ELECTRICAL PARAMETERS TEST SET

GENERAL TERMS & CONDITIONS

VII Price Evaluation: PRICES SHALL BE CONSIDERED ON LANDED COST BASIS (COST TO BHEL). LANDED COST SHALL BE WORKED OUT ON PRICE QUOTED INCLUDING FREIGHT, EXCISE DUTY, AND SALES TAX AFTER TAKING OUT CENVAT AND VAT BENEFIT, AS APPLICABLE. THE COMPARATIVE STATEMENT SHALL BE WORKED OUT ON OVERALL LANDED COST BASIS FOR THE WHOLE PACKAGE.

- a) The comparative statement of the prices prepared on the reference date shall remain firm throughout the execution period. Any change in duty & tax structure during execution of the contract will not be considered for re-ranking of vendors.
- b) The lowest price received against BHEL tender need not be commercially lowest price (L1) .
- c) BHEL reserves the right/option to REFLOAT the tender if L1 price is not the lowest acceptable price to BHEL.

VIII. PAYMENT TERMS:

ALL PAYMENTS WILL BE MADE BY ELECTRONICS TRANSFER OF FUNDS (NEFT) SYSTEM. THE VENDOR SHOULD FURNISH THE NEFT MANDATE.

- 100% OF MATERIAL VALUE PLUS FULL TAXES & DUTIES –FOR ACCEPTED QTY.AS PER BHEL STD & SPECIFICATION.TERMS OF PAYMENT THAT IS 30 DAYS CREDIT.

IX. LOADING FACTOR:

IF THE OFFER IS NOT INLINE WITH THE TERMS & CONDITIONS SPECIFIED BY BHEL THE FOLLOWING LOADING CRITERIA WILL BE ADOPTED FOR EVALUATION.

A. PAYMENT TERMS:

INTEREST @ 20.5 % P.A. SHALL BE COMPUTED FOR THE DIFFERENTIAL PERIOD BETWEEN BHEL TERMS OF PAYMENT AND THAT OFFERED. NO UNSECURED ADVANCE PERMITTED.

B. TRANSPORTATION CHARGE:

AS PER BHEL RATE CONTRACT PREVAILING ON THE DATE OF OPENING OF TENDER

C. TRANSIT INSURANCE:

AS PER BHEL RATE PREVAILING ON THE DATE OF OPENING OF TENDER

D. OTHERS:

ANY OTHER COST COMPONENT WHICH THE VENDOR HAS NOT QUOTED. EITHER A SEALED QUOTE FROM THE VENDOR WILL BE OBTAINED OR THE HIGHEST OFFER FOR THAT COMPONENT WILL BE LOADED

- E. BHEL will have the option to defer the supplies of any purchase order with a notice period of 20 calendar days.

TENDER FOR THE SUPPLY OF ELECTRICAL PARAMETERS TEST SET

GENERAL TERMS & CONDITIONS

X. DEVIATIONS:

A SEPARATE SHEET INDICATING DEVIATIONS IN TECHNICAL SPECIFICATION, COMMERCIAL TERMS AND CONDITIONS TO BE ENCLOSED IN PART A OF THE OFFER. IF THERE ARE NO DEVIATIONS SAME AS TO BE CERTIFIED AND DULY SIGNED BY VENDOR.

XI. LATE DELIVERY CHARGES:

IN CASE OF COMPOSITE CONTRACT, FOR ANY DELAY IN SUPPLY AND SUCCESSFUL COMMISSIONING OF THE EQUIPMENT AN AMOUNT OF 0.5 % PER WEEK UPTO A MAXIMUM OF 10% OF THE CORRESPONDING COMPONENT OF ORDER VALUE WILL BE DEDUCTED

XII. CLARIFICATIONS SOUGHT BY BHEL DURING TECHNICAL & COMMERCIAL EVALUATION

IN CASE BHEL ASKS FOR ANY CLARIFICATION THE VENDOR HAS TO SUBMIT THE SAME WITHIN THE SPECIFIED DATE OTHERWISE THE OFFER WILL BE EVALUATED CONSIDERING THE CLARIFICATIONS, IF ANY RECEIVED, AS ON THE SPECIFIED DATE. NO GRACE PERIOD OR LATE SUBMISSION IS ALLOWED

XIII. RISK PURCHASE CLAUSE:

BHEL, AT ITS OPTION, WILL BE ENTITLED TO PURCHASE ELSEWHERE AT THE COST AND RISK OF THE VENDOR, EITHER THE WHOLE OR PART OF THE GOODS WHICH THE VENDOR HAS FAILED TO DELIVER WITHIN THE STIPULATED TIME. THE VENDOR SHALL BE LIABLE FOR ANY LOSS THAT BHEL MAY SUSTAIN BY REASON OF SUCH RISK PURCHASES. BHEL RESERVES THE RIGHT TO CANCEL THE CONTRACT IN FULL OR PART, IF PERFORMANCE WITH RESPECT TO QUALITY AND DELIVERY IS UNSATISFACTORY; AND BHEL SHALL HAVE THE RIGHT TO ENTER INTO CONTRACT WITH OTHER VENDORS AGAINST SUCH CANCELLATION OF CONTRACT AGAINST RISK PURCHASE CLAUSE.

XIV. INSPECTION:

INSPECTION OF THE MATERIALS WILL BE CONDUCTED BY BHEL EITHER ON IT RECEIPT AT BHEL OR AT VENDORS PLACE. IN CASE OF PRE DESPATCH INSPECTION ADEQUATE NOTICE HAS TO BE GIVEN BY THE VENDOR FOR DEPLOYMENT OF BHEL'S PERSONNEL. BHEL HAVE RIGHT TO REVIEW THE QUALITY PLAN OF THE MANUFACTURER AND ACCESS TO THE PROCESS DATA OF THE MANUFACTURER. ALL NECESSARY TEST & CALIBRATION CERTIFICATES SHOULD ACCOMPANY SUPPLY.

XV. BHEL SPECIFICATION:

PLEASE SEE ATTACHED SPECIFICATION: SPEC.NO.: R&D/CTI/Elec-13

PART-I



GENERAL TERMS & CONDITIONS OF TENDER
REF: R&D/CTI/Elec-13

TECHNO COMMERCIAL BID

TENDER REFERENCE: R&D/CTI/Elec-13

DATE OF ISSUE: 28.10.2013

LAST DATE FOR RECEIPT OF TENDER: 19.11.2013 BY 1.00 P.M

OPENING OF TECHNO COMMERCIAL BID: 19.11.2013 AT 2.30 P.M

ESSENTIAL CRITERIA OF TECHNO COMMERCIAL OFFER

ADDRESS OF THE FIRM

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SL.NO	PARAMETER	BHEL SPEC/REQUIREMENT	VENDOR OFFER
1	Name of Contact person	TO BE MENTIONED	
2	E-mail ID	TO BE MENTIONED	
3	Mobile number	TO BE MENTIONED	
4	Land line number	TO BE MENTIONED	
5	Fax number	TO BE MENTIONED	
6	SSI/M&SE/MS/IED	IF YES ENCL.CERTIFICATE	
7	ENTERPRENER BELONGS TO SC/ST	IF YES ENCL.CERTIFICATE	
8	Delivery Term	F.O.R-BHEL EPD STORES	
9	Payment terms	45 days Credit after receipt of material at BHEL-EPD-stores for the accepted qty	
10	Lead time for MFG & Supply	30 days from PO date	
11	LD Clause	Applicable @0.5% per week upto a maximum of 10% for delayed supplies	
13	Offer validity	90 DAYS FROM DATE OF TENDER OPENING	
14	Tax and duty structure	Excise duty%	
		E Cess%	
		Central Sales Tax%	
		VAT %	
		Any other	

SIGNATURE OF THE TENDERER



BHARAT HEAVY ELECTRICAL LIMITED
CORPORATE R&D, CTI, BHEL MALLESWARAM COMPLEX
PROF CNR RAO CIRCLE, OPP. IISc, BANGALORE 560 012, INDIA

SPEC. No. R&D/CTI/Elec-13

Date: July 22, 2013

EQUIPMENT: ELECTRICAL PARAMETERS TEST SET

Automatic Dielectric Constant, Tan Delta & Resistivity Test Set

A. General Features:

The Test Set is to be used to measure the Dielectric Constant ϵ , Capacitance, Dielectric loss, Tan Delta (Dissipation Factor), Resistance/Resistivity of various insulating materials, particularly solid materials and hence should be capable to measure those parameters most reliably as per various international (ASTM or IEC standards) or national standards. Hence, all specific attachment/s for measuring those parameters for solid insulation materials along with the base equipment, if required, are also to be provided, i.e., suitable dielectric test cell for solid materials, standard calibrators for the measuring the parameters, suitable/specific cables for electrical connections, suitable software for interfacing with PC/Laptop for transferring, storing test results/data etc).

The equipment should be capable of measuring (microprocessor-based programmable) the said parameters for the AC test in the range of 200 - 2400 volts and 100 - 1,000 volts for the DC test respectively. All the measurements are to be performed by the equipment automatically and provision is to be made to display the results on the front panel. The equipment should also have the provision to repeat any test/s and display all the results accordingly. Besides, provision is also to be made with the equipment to transfer all the test data/results to a PC using suitable software (compatible to the equipment) that could be printed using the USB serial port, or provision to store the data in a non-volatile memory as well.

The vendor/s should have service centres and calibration service facilities in India. The address and contact details of service centres for the purpose should be listed.

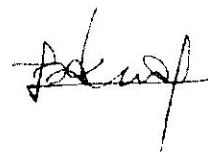
B. Technical Specifications:

Sl. No.	Description	BHEL Specifications

1.	Test Set Type	Automatic Test Set without any dials or potentiometers for balancing
1A	Front panel operation	Preferably, soft touch keypad to be provided for entering parameters for testing
2	Test Voltage	200-2400 AC in 1V steps at line frequency
2A	Accuracy of the test voltage	±1% of output
3	Tan Delta / Dissipation Factor	
3A	Range	0-1.000 or 0 to 100%
3B	Resolution	0.00001
3C	Accuracy	±1% of the reading ±0.0001
4	Capacitance	
4A	Range	0 to 1600pF
4B	Resolution	0.1pF
4C	Accuracy	±0.1% of the reading ±0.1pF
5	Dielectric Constant	
5A	Range	1 to 20 when using a typical test cell (C=60-70pF)
5B	Resolution	0.001
5C	Accuracy	Within ±0.1% of the reading
6	Dielectric Loss	
6A	Range	0-10.0 Watts
6B	Accuracy	±1% of readings ±10 ⁻⁵
	Resistance – Resistivity	
7	Test Voltage	100-1000V, DC in steps of 1Volt
7A	Accuracy	±1% of setting

8	Resistance	
8A	Range	1M Ω to 10T Ω
8B	Accuracy	2% from 1 Mega Ω to 10 Giga Ω (10 ⁶ - 10 ¹⁰ Ω) Upto 5% from 10 Giga Ω - 1Tera Ω (10 ¹⁰ - 10 ¹² Ω) Upto 10% above 1 Tera Ω (1T Ω - 10T Ω) (10 ¹² - 10 ¹³ Ω)
9	Resistivity	
9A	Range	1000M Ω cm - 10 Peta Ω cm (10 ⁹ - 10 ¹⁶ Ω cm)
9B	Accuracy	2% (1G Ω cm - 10T Ω cm) (10 ⁹ Ω cm - 10 ¹³ Ω cm) Up to 5% (10T Ω cm - 1Peta Ω cm) (10 ¹³ Ω cm - 10 ¹⁵ Ω cm) Up to 10% (1 Peta Ω cm - 10 Peta Ω cm) (10 ¹⁵ Ω cm - 10 ¹⁶ Ω cm)
10	General & Standard Accessories	
10A	Input Supply	230V \pm 10%, 50 Hz
10B	Measurement	Automatic
10C	User Interface	Panel display with easy to use keypad
10D	Data Download option	Suitable & standard option
10E	Data Storage	Must be able to store at least 50 or more test results
10F	Temperature Range	-10 to 50 deg C
10G	Humidity	Ambient to 90%, RH
10H	Connecting Cables	All necessary cables for connection with AC mains and with accessories to be provided with suitable safety interlocks etc
10I	Catalogue Details	Detailed Catalogue of the instruments and accessories / attachments should be submitted with the offer

10J	Operating Manual	Supplier shall provide operation manual and other documents along with the Test and guarantee certificate
11	Software Program	Suitable Windows Interface Software shall be provided in CD which could be installed in BHEL PC/Laptop for connecting to the Test Set and Operating the test Set via PC/Laptop and retrieving stored test results from instrument
12	Standard Calibrator	Must provide calibrator with suitable test report for at least 1 value of capacitance, 3 values of tan delta and 4 values of resistance – for testing the accuracy of the test set
13	Compliance to Standards	The offered product should conform to testing of solid insulation materials as specified in the relevant international standards of IS, ASTM, IEC, specifications as the case may be
14	Time period for Supply	04 – 06 Weeks from the date of placing the PO
15	Demonstration	The vendor shall Demonstrate all features including trial runs to the satisfaction of BHEL during the Commissioning / Demonstration. Vendor to confirm and comply with the same.
16	After sales service & calibration service on call	The vendor/s should have service centres and calibration service facilities in India. The address and contact details of service centres for the purpose should be listed.



Dr. SUKUMAR ROY, Dy. Genl.
Corp. R & D, BHEL, BANGALORE