



Bharat Heavy Electricals Limited
(A Govt. Of India Undertaking)

**Project Engineering
Management**

**OPEN TENDER ENQUIRY FOR ELECTRIC LAB EQUIPMENTS FOR 1X 800 MW GSECL
WANAKBORI STPP UNIT 8**

Ref No. : PE/PG/WAN/E-5236/2016

Date: 16.08.2016

CORRIGENDUM/ ADDENDUM-05

Tender Enquiry no.: PE/PG/WAN/E-5236/2016

EXTENDED DUE DATE
29 AUG 2016
02.00 PM

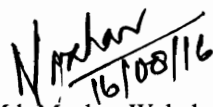
The Due date & time of submission of tender for Electric Lab Equipment's invited vide Enquiry No. PE/PG/WAN/E-5236/2016 dated 27.05.2016 for **1 x 800 MW GSECL WANAKBORI STPP UNIT 8** is extended upto 29.08.2016, **02.00 P.M.** Part- I (Techno-Commercial) bids shall be opened on 29.08.2016, 03.00 P.M. This may be considered as final extension and no further extension of bid submission is envisaged.

Bidder to go through enclosed Amendment-01 to Technical specifications issued along with enquiry.

The bidders who have already submitted their bids for the said tender enquiry, may go through the corrigendum & enclosed Amendment-01 of Technical Specifications and in case it is felt required, may furnish revised bids with envelopes duly superscribed as "Revised bid (only to be considered)".

In case more than one make/model are quoted, price bids of same to be furnished in separate sealed envelope clearly mentioning the name of item/make.

All bidders are requested to visit the website www.bhel.com (Tender Notifications Section) OR www.bhhelpem.com, all future corrigenda/addenda, if any, for this tender shall be hosted only on above websites.


Md. Mazhar Wahab
Sr. Engineer/ PG-1-1

Please reply to:

Mazhar Wahab, Sr. Er./ Gaurav Jain, Mgr/ PGI-I

BHEL-PEM,

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AMENDMENT NO.1 TO THE TECHNICAL SPECIFICATION FOR ELECTRICAL LAB EQUIPMENTS
PE-TS-408-556-E002, R0 DATED 11.08.16

1. 'Annexure-V of Section-C: Technical Requirements (Page 34 of 48)' of the Technical Specification to be considered as superseded by the "Revised Annexure-V of Section-C: Technical Requirements".
The preferred list of makes of BHEL's Customer as Annexure-V of Section-C of Technical Requirement is attached along with this amendment. Also, refer the note mentioned in the annexure.
2. 'Clause 4.6 of Section-C: Specific Requirements (Page 11 of 48)' of the Technical Specification to be read as:
"All bidders are advised to quote 'one or more' make/model against each equipment best to suit specification requirement. Any make of equipment quoted by bidders apart from the preferred makes of BHEL's Customer as per "Revised Annexure-V of Section-C: Technical Requirements" (part of this amendment), shall be subject to the approval of BHEL/BHEL's customer. Offers with makes acceptable to BHEL/BHEL's customer only shall be considered for evaluation. Bidders to make their offers accordingly."
3. 'Annexure-III of Section-C: Technical Requirements (Page 27 of 48); Para-2' of the Technical Specification:
"The items covered under scope of supply and erection shall be of Owner's approved makes." This line to be read as:
"The items covered under scope of supply and erection shall be of makes accepted by BHEL's customer."
4. 'Item No. 30 of Annexure-II of Section-C: Technical Requirements (Page 25 of 48)' of the Technical Specification to be read as:
"Generator On Line Partial Discharge Real Time Monitoring System:
To detect and monitor partial discharge activity in generator stator windings with generator on load. To generate alarms in case of excessive partial discharge. Alarm system shall be provided & alarm shall be generated, when generator crosses the specified value of partial discharge. Should have the capability to acquire partial discharge patterns and determine PD quantities as apparent charge, quadratic rate and average discharge current for each phase. Standalone type with facility for storage of trend data and patterns. With facility to download patterns& trends on to PC or LAN; visualization software and automatic report generation. Having noise suppression circuitry for input and signal transfer. The coupling capacitors connected on the line Terminals of the generators shall be used as PD sensors. Necessary coupling capacitor and its connection kit shall be included and the instrument shall be compatible with surge capacitor (of 0.125 μ F) supplied with the generator. The instrument shall be in 19" rack-mounted design. Housed in a wall-mounting IP65 case. Other specifications as below:
PD Input: 4 channels, 0-30 V rms
Frequency Ranges: 0.3 MHz - About 10 M Hz
Acquisition Software: Standalone C-based
Evaluation Software: Standalone Java based / latest applicable software (as per Mfr. standard)
Data Storage: Up to 48 values per channel 1 Pattern per day
Visualisation: Web server with standard web-browser and Windows based Internet Capable Software
Communication: 100 M Bit Ethernet interface with TCP/IP protocol and fibre-optic Communication."
5. "BOQ-CUM PRICE SCHEDULE (ANNEXURE-A) (Page 35 of 48)' of the Technical Specification to be considered as superseded by the "Revised BOQ-CUM PRICE SCHEDULE (ANNEXURE-A)".

PART OF AMENDMENT NO.1 DATED 11.08.16**1 X 800 MW WANAKBORI TPS****PACKAGE- ELECTRICAL TESTING LAB EQUIPMENT****REVISED BOQ-CUM PRICE SCHEDULE (ANNEXURE-A)**

S.NO.	ITEM DESCRIPTION	QTY	Unit	UNIT RATE (Rs.)	TOTAL PRICE (Rs.)	
1	Portable 10KV Digital Automatic Insulation Tester	2	No.			
2	Portable HV Decade Resistance Box in Polystyrene case with lid and carrying handle	1	No.			
3	Portable HV AC Test Set	1	No.			
4	Automatic Capacitance and Tan-Delta Test Set	1	No.			
5	Portable Transformer Oil Breakdown Test Set	1	No.			
6	Portable Karl-Fischer Test Set	1	No.			
7	3-phase Portable Transformer Turns Ratio & Vector Group Meter	1	No.			
8	Portable Digital DC Resistance Meter	1	No.			
9	Portable High Current Digital Micro Ohm Meter	1	No.			
10	Portable Primary & Secondary Current Injection Test Kit with Separate Control & Loading Units	1	No.			
11	Portable Automatic Earth Tester	1	No.			
12	Portable Three Phase Universal Protective Relay Test Set	1	No.			
13	Precision Digital Multi-meter	1	No.			
14	Portable Digital Frequency Meter	1	No.			
15	Digital Sound Level Meter	1	No.			
16	Digital Tachometer	1	No.			
17	Cable Fault Locator (upto 11kV)	1	No.			
18	Portable Hand held SF6 Gas Leakage Detector	1	No.			
19	Portable Hand held Hydrogen Gas Leakage Detector	1	No.			
20	Portable Vacuum Tester	1	No.			
21	Portable Light Intensity Meter	1	No.			
22	Portable Circuit Breaker Motion Analyser	1	No.			
23	Portable, Hand-held Thermal Imaging Camera	1	No.			
24	Portable High Voltage/Live Line Detector	1	No.			
25	Tong Testers	3	No.			
26	Portable Phase Sequence/Continuity Indicators	2	No.			
27	Relay Tool Kit	2	No.			
28	HV Discharge Rod & Portable Earthing Equipment	2	No.			
29	Hot Sticks (Live/Dead Line Tester)	2	No.			
30	Generator Online partial Discharge Real Time Monitoring System	1	No.			

NOTE :-

1) EQUIPMENT TO BE SUPPLIED ALONG WITH ESSNTIAL ACCESSORIES FOR SUCCESSFUL OPERATION OF EQUIPMENT AT SITE .i.e. CLAMPS, CLIPS,LEADS ,CARRYING CASE etc.

2) ALL EQUIPMENTS SHALL BE SUPPLIED WITH VALID CALIBRATION CERTIFICATE, WHEREVER APPLICABLE.

3) IN ADDITION TO NORMAL PACKING OF THE EQUIPMENTS, THE EQUIPMENTS TO BE PROPERLY PACKED IN GALVANIZED SHEET STEEL TRUNK/BOX WITH PROPER LOCK & KEY ARRANGEMENT.

PART OF AMENDMENT NO.1 DATED 11.08.16

1 X 800 WANAKBORI TPS : REVISED ANNEXURE-V OF SECTION-C: TECHNICAL REQUIREMENTS

ITEM NO.	ITEM DESCRIPTION	PREFERRED MAKES OF BHEL'S CUSTOMER
1.0	Portable 10KV Digital Automatic Insulation Tester	Meterel and Motwane
2.0	Portable HV Decade Resistance Box in Polystyrene case with lid and carrying handle	Cropico and SCOPE
3.0	Portable HV ac Test Set comprising	High voltage, High voltage Inc., Phenix tech, Hipotronics
4.0	Automatic Capacitance and Tan-Delta Test Set	Doble and Omicron
5.0	Portable Transformer Oil Breakdown Test Set	BAUR's
6.0	Portable Karl-Fischer Test Set	ECH Elektrochemie Halle and Metrohm
7.0	3-phase Portable Transformer Turns Ratio & Vector Group Meter	Omicron and SCOPE
8.0	Portable Digital dc Resistance Meter	Omicron
9.0	Portable High Current Digital Micro Ohm Meter	Meterel and Motwane
10.0	Portable Primary & Secondary Current Injection Test Kit with Separate Control & Loading Units	Omicron and Doble
11.0	Portable Automatic Earth Tester	GE-OHM C make ,Syselec and Motwane
12.0	Portable Three Phase Universal Protective Relay Test Set	Omicron and doble
13.0	Precision Digital Multi-meter	Motwane and KYORITSU(KEW)
14.0	Portable Digital Frequency Meter	AGILENT
15.0	Digital Sound Level Meter	FLIR and HTC Instruments
16.0	Digital Tachometer	FLIR and Hioki's
17.0	Cable Fault Locator	BAUR's
18.0	Portable Hand held SF6 Gas Leakage Detector	Ion Science, WIKA Alexander Wiegand SE & Co. KG and DILO
19.0	Portable Hand held Hydrogen Gas Leakage Detector	H2 SCAN(HY-ALERTA™ 500),Ion Science and OLDHAM
20.0	Portable Vacuum Tester	Phenix tech.
21.0	Portable Light Intensity Meter	FLIR
22.0	Portable Circuit Breaker Motion Analyser	Omicron and HiSAC Ultima-SCOPE make with suitable Laptop
23.0	Portable, Hand-held Thermal Imaging Camera	FLIR

24.0	Portable High Voltage/Live Line Detector	Metrohm,Technology Products ,Motwane
25.0	Tong Testers	KYORITSU(KEW)
26.0	Portable Phase Sequence/Continuity Indicators	AVO, Hioki, Mitchell, Highvoltage, Extech and Automatic Electric
27.0	Relay Tool Kit	Omicron and Doble
28.0	HV Discharge Rod & Portable Earthing Equipment	Technology Product
29.0	Hot Sticks (Live/Dead Line Tester)	Metrohm,Technology Products ,Motwane
30.0	Generator on Line Partial Discharge Real Time Monitoring System.	SIEMENS and Omicron
Note: Additionally, the following makes shall be acceptable for all items:		
a.	Megger (UK)	
b.	Tinsley (UK)	
c.	Vettinar (France)	
d.	Fluke (USA)	