

**PROCUREMENT PROCEDURE OF CPRI (NON WORKS)**

Revision No. : 04  
 Dt of Revision : 27.08.2020  
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Issue No : 2  
 Issue Dt. : 30.06.2003  
 Issued by : P A  
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 FORMAT NO.:CPRI/PUR/ETBID/GTP

**Section IV T - Technical Specification**

**CENTRAL POWER RESEARCH INSTITUTE, BENGALURU/BHOPAL Web: www.cpri.in. www.tenderwizard.com/CPRI**

Tender Enquiry No : CPRI BLR20CDD08S680

Description of the Equipment/Goods/Services : Supply of AC/DC (bipolar) Corona Ageing Setup on material samples.

Note : 1) The technical bid submitted in other than this format is liable to be rejected.

2) All blue fields are mandatorily to be filled in.

Name and address of the bidder					
Quotation Number and Date					
Sl.No.	Technical Specifications/Parameters	Qty	To be completed by the Bidder		
			Details of guaranteed technical parameters offered by the bidder	Guaranteed Technical Particulars (GTP)	Deviations from GTP
1	<b>Place where equipment /service to be supplied /provided:</b> Insulation Laboratory - Cables & Diagnostic Division, Central Power Research Institute, Bangalore.				
2	<b>Scope:</b> In power transmission lines, corona can effect even on well designed transmission line and insulators especially under wet conditions. Corona if allowed to occur continuously can significantly damage the polymeric insulators used in such lines in the long run. It is required for carrying out AC/DC (bipolar) Corona Ageing on Silicone Rubber for research and development work. Supply, Installation, commissioning and training to be provided at Insulation lab.	1 Number			
3	<b>GENERAL:</b> 1. A standalone AC/ bipolar DC corona ageing test setup for corona ageing duration of 100 hours 2. Variable AC voltage upto 15kV (arching voltage) 3. Variable DC voltage upto 22kV (arching voltage) 4. HV electrode to be made of brass: diameter is 87 mm. Concentric arrangement of needle electrodes (Refer Fig.1). Length of the seven innermost needles is 12 mm, the length of the twelve needles in the intermediate circle is 11 mm and the length of the twelve outermost needles is 9 mm. The tips of the needles have radius of 48 µm. 5. Ground electrode - brass, diameter 130 mm and thickness 2 mm. Sample to be placed over the ground electrode. The ground electrode to be placed on an adjustable surface, so that the distance between the tip of HV electrode and sample surface can be adjusted to a minimum distance of 5mm and maximum to 50mm. 6. Entire test setup must be housed inside a transparent chamber 30xm x 30cmx 30cm thickness 20mm acrylic sheet with three inlet/outlet valves - 1. For normal air, 2. For acid/salt fog, 3. For future use. Provision to be provided for air tight opening and closure of each valve independently. 7. Circulation of air inside chamber to be at 5 litre/min, controlled by an oil free portable vacuum cum pressure pump of approximate rating 1/16HP. 8. Injection of acid/salt fog to be given through a fine mist achieved via nozzles, rate to be controlled. 9. HV electrodes must be of removable type for easy removal and replacement with other types of electrodes. Electrode pins must also be removable for replacement in case of damage. 10. Corona current to be captured through a DSO/Data acquisition system across resistor.				

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			Details of guaranteed technical parameters offered by the bidder	Guaranteed Technical Particulars (GTP)	Deviations from GTP
4	<p><b>SPECIFICATIONS FOR SOURCE:</b></p> <p><b>I. Technical Specification:</b></p> <p>a) Operating Voltage - 230± 5% AC 50 Hz.</p> <p>b) Output Voltage e - 0 – 15kV AC,continuously variabl                      - 0 - 22kV DC +Ve / -Ve , continuously variabl</p> <p>c) Monitor - 3 ½ digit DPM for out put voltage.</p> <p>d) Resolution - 0.1 kV.</p> <p><b>II. Controls:</b></p> <p>a) Power ON with indication.</p> <p>b) HT ON/OFF push button with indications.</p> <p>c) Increase /decrease push button.</p> <p>d) ON/OFF control switch for voltage control.</p> <p><b>III. Protection:</b></p> <p>1) Over load trip with indication. (5 mA and 10 mA selectable).</p> <p>2) Minimum position of the voltage regulator shall be Interlocked with HT ON.</p> <p>3)Type - Indoor.</p>				
5	<p><b>Note:</b></p> <p>a) A BNC connector for monitoring current pulses with proper protection shall be provided on control panel</p> <p>b) AC/DC voltages shall be measured with suitable HV divider connected directly across output terminals</p> <p>c) Proper HF filters/surge suppressors shall be provided to protect control/measuring circuit during high corona discharges</p> <p>d) Valid NABL calibration certificate to be provided</p> <p><b>e) Warranty 12 months from date of supply</b></p>				

PN: 1) Mere statement of "Complied" do not suffice the requirement. The details of technical parameters in proof of CPRI requirements shall be furnished along with technical write-up, catalogues, brochures, literatures, phamplates, or any other documents shall be submitted in hard copy along with technical bid.

2) Calibration reports/certificates, factory test reports/certificates from an accredited agencies/facilites shall be submitted wherever applicable.

3) CPRI reserves the right to conduct "predispatch inspection" prior to dispatch at the works of the supplier and the expenditure towards PDI shall be borne by CPRI. However information regarding the rediness of the equipment/machinery for the PDI shall be communicated in writing at lease 70 days in advance.