

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
 Documents : PPM
 FORMAT NO.:CPRI/PUR/ETBID/GTP

Section IV T -Technical Specification

CENTRAL POWER RESEARCH INSTITUTE, BENGALURU/BHOPAL Web: www.cpri.res.in

Tender Enquiry No : CPRI/BLR23UHVRL27C1151

Description of the Equipment/Goods/Services : Coupling Capacitors

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
Coupling capacitor					
1	Equipment: Coupling capacitors for measurement of partial discharge in Power & Distribution transformers				
2	Scope: Design, development, manufacturing, testing, supply, installation and commissioning of Coupling capacitors suitable for measurement of Partial discharges of Power & Distribution Transformers				
3	Coupling Capacitors - 50 kV				
3.1	Rated voltage: 50 kVrms				
3.2	Rated capacitance : ≥ 1 nF @ 50 Hz				
3.3	Number of coupling capacitors : Three numbers	3			
3.4	Duty Cycle: Continuous				
3.5	Frequency of operation : 50 Hz - 200 Hz				
3.6	Dielectric dissipation factor : $\leq 2e-3$ @ 50 kVrms				
3.7	Operating Conditions at site: Ambinet temperature: 10°C to 45 °C Relative humidity: 45 % to 80% RH (Non-condensing) Mean height of site above sea level: 542 meters				

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			Details of guaranteed technical parameters offered by the bidder	Guaranteed Technical Particulars (GTP)	Deviations from GTP
3.8	Partial discharge level : less than 2 pC @ 50 kVrms				
3.9	Type of Installations: Mobile, The base of the coupling capacitor shall be isolated with insulators. The same shall be fitted on steel frames with high quality wheels for mobility. High Voltage terminal shall be provided with suitable sized corona rings to avoid the discharges from the connection, if required.				
3.10	Installation: Indoor application				
3.11	Type of Materials used for Coupling Capacitor body: FRP or any equivalent material				
4	Coupling Capacitors - 5 kV				
4.1	Rated voltage: 5 kV				
4.2	Rated capacitance : ≥ 1 nF @ 50 Hz				
4.3	Number of coupling capacitors : Three numbers	3			
4.4	Duty Cycle: Continuous				
4.5	Frequency of operation : 50 Hz - 200 Hz				
4.6	Dielectric dissipation factor : $\leq 2e-3$ @ 5 kVrms				
4.7	Partial discharge level : less than 2 pC @ 5 kVrms				
4.8	Installation: Indoor application				
5	Calibration and type test reports: The coupling capacitors shall be type and routine tested for following tests as per IEC 60358 standard at any ISO/IEC 17025:2017 accredited laboratory.				
5.1	50 kV Coupling capacitor				
5.1.1	Type Test: Power frequency voltage withstand test @ 70 kVrms for 1 min Routine tests: 1. Capacitance and dielectric dissipation factor at power frequency before and after type tests 2. Partial Discharge Measurement and values shall be less than 2 pC at 50 kV rms before and after types tests				

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5.2	5 kV Coupling Capacitor				
5.2.1	<p>Type Test: Power frequency voltage withstand test @ 5 kVrms for 1 min Routine tests: 1. Capacitance and dielectric dissipation factor at power frequency before and after type test 2. Partial Discharge Measurement and values shall be less than 2 pC at 5 kV rms before and after type test</p>				
6	<p>Commissioning and Functional Test: The following commissioning test shall be performed along with other testing and measuring equipment related to transformer testing. 1. Partial discharge measurement shall be demonstrated. Note: The measuring and other testing equipment will be provided by CPRI during the acceptance tests.</p>				
7	<p>Technical information to be provided: The following information shall be included in the bid: 1. Type of the capacitor, Technical characteristics of the capacitor (capacitance, rated voltage, dielectric dissipation factor, Partial discharge level etc), Dimensions (length x width x height) in mm, Mass [kg]. The following documents shall be supplied along with supply. General drawings, Operating manual and maintenance manuals, reports of type and routine tests.</p>				
8	<p>Warranty: The equipment shall be guaranteed for minimum period of 12 months from date of successful demonstration at site.</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, pamphlets, or any other documents shall be submitted in hard copy along with technical bid.
- 2) Calibration reports/certificates, factory test reports/certificates from an laboratory accredited as per ISO/IEC 17025:2017 /facilities shall be submitted wherever applicable.
- 3) CPRI reserves the rights 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 60 days in advance.
- 4) The standards quouted in the tender document are to be considered only latest editions/versions.