

PROCUREMENT PROCEDURE OF CPRI (NON WORKS)					
Revision No. : 04				Issue No : 2	
Dt of Revision : 27.08.2020				Issue Dt. : 30.06.2003	
Page No. : 1 of 2				Issued by : P A	
Section : Formats				Documents : PPM	
Topic : Technical Specifications format				FORMAT NO.:CPRI/PUR/CTBID/GTP	
Section IV T -Technical Specification					
CENTRAL POWER RESEARCH INSTITUTE, BENGALURU/BHOPAL Web: www.cpri.in, www.tenderwizard.com/CPRI					
Tender Enquiry No : CPRI/BLR20CDD09S661					
Description of the Equipment/Goods/Services : AC/DC Variable Stress Ageing Chamber Step-up.					
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	Place where equipment /service to be supplied /provided: Insulation Laboratory - Cables & Diagnostic Division, Central Power Research Institute, Bangalore.				
2	Scope: Design, fabrication, supply, installation, commissioning and training of a standalone laboratory model of a variable stress DC (bipolar)/AC ageing chamber for ageing of maximum 3 (ie. 1,2,3 insulators (creepage length: maximum 350mm, maximum weight-5kg together) at a time)insulators together.	1 Number			
3	Chamber: A weathering chamber(indoor) of dimensions 1mx1mx1m made of SS Double walled insulated stainless steel(for heat retention) corrosion resistant, with a UV resistant viewing glass window, with provisions to simulate long duration ageing conditions (5000 hours or more) of - electric, UV, thermal, rain and corrosion (salt fog of ph from 4 to 10).				
4	HV source: Shall be provided with suitable Control panel, Voltage regulator, HT unit, DC extension Unit etc for the smooth control/operation fulfilling following technical specifications.				
5	Technical Specification: a) Operating Voltage - 230V \pm 5% AC 50 HZ. b) Output Voltage - 0 -15kV AC (rms) 50Hz and 0-22kV DC (+Ve/-Ve) selectable and continuously variable. c) Monitor - 3 ½ digit DPMs for output voltage and load currents d) Resolution - 0.1 kV, Current- 1mA e) Regulation - Less than 5% at 250 mA AC- resistive current. f) Short circuit current at rated voltage \geq 5Amp. g) Over load Trip level. -260 mA continuous for 2 Seconds for both AC/DC (+Ve/-Ve) h) Rated current. - 250 mA continuous for both AC/DC (+Ve/-Ve) i) Ripple frequency - 50 Hz Or better. j) Ripple factor at rated voltage and rated current \leq 10 % k) Provision to opening window during tests for taking thermal images to be provided				
6	Controls and Monitors: a) ON/OFF with indication. b) HT - ON/OFF with indication. c) Increase / Decrease Push buttons for test voltage. d) ON/OFF Lock for test voltage. e) Over load trip with indication. f) Emergency OFF switch to be provided				

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7	<p>Interlocks/Safety / Protection:</p> <p>a) Over voltage: Pre-set at 15.1kVAC and 22.1kV DC bipolar.</p> <p>Features required in chamber:</p> <p>a) Generation of UV light through suitable numbers (4 numbers) of UV-A lamps of wattage 15W to provide irradiance 1W/m2. Lamps must be of detachable arrangements for future changes. Individual switch to be provided for on/off of each lamp.</p> <p>b) Heater with air flow circulating arrangement, adjustable to temperature from ambient to 90 degrees.</p> <p>c) Artificial rain arrangement for humidity using spray nozzles to achieve:</p> <p>a. variable humidity upto 95% (for temperatures upto 35 degrees)</p> <p>b. variable humidity upto 80% (for temperatures upto 50 degrees)</p> <p>c. variable humidity upto 50% (for temperatures upto 90 degrees)</p> <p>d) Material used for artificial rain arrangement to withstand solutions of ph 4 to 10 as well.</p> <p>e) Salt fog of ph from 4 to 10 for corrosion simulation to be provided as a fine mist through nozzles.</p> <p>f) Suitable motor capacity to attain an average precipitation rate for slno. c) and e) as 1 to 2 mm/min.</p> <p>g) Digital timers to be used for a cyclic on and off of either one or more of parameters throughout the ageing duration.</p> <p>h) Provision to be provided to record leakage current through the samples on a DSO/Data Acquisition System.</p> <p>i) A drain arrangement with a tap and hose to be provided for water removal during course of test.</p> <p>j) Approximate weight of samples together – maximum 5kg.</p> <p>k) A duration of test for 24 hours is as shown in Fig.1. This test cycle needs to be repeated for every 1000 hours for 5000 hours</p> <p>l) Sample of test chamber (representative model only) is shown in Fig.2</p> <p>m) Options for preprogramming to run for 1000 hours - ie in auto mode for variations in UV, rain, salt fog and electric stress.</p> <p>n) Digital display for UV, temperature and humidity in chamber</p>				
8	<p>General Notes :-</p> <p>a) The equipment shall not trip on overload for scintillation currents having less than 1ms duration and magnitude up to 1A.</p> <p>b) 3 nos. female BNC connectors with cables for monitoring the current pulses (AC/DC) for 3 samples with protection shall be provided on the control panel.</p> <p>c) Minimum position of the regulator shall be interlocked with HT ON.</p> <p>d) The test voltage AC/DC shall be measured with suitable precision HV dividers connected directly across the output terminals.</p> <p>e) Test area door interlock with HT-ON shall be provided.</p> <p>f) All the interconnecting cables shall be provided with proper connectors.</p> <p>g) Items having more than 30 kg. shall be provided with rotatable nylon wheels for easy movement.</p> <p>h) Calibration certificate traceable to NABL to be provided Accessories to be supplied along with the instrument.</p> <p>i) Equipment must be capable of retaining all accuracies and tolerances in operating conditions of ambient to 50 degrees and 60%RH.</p>				
9	<p>Warranty: 12 months from the date of installation and commissioning . Supply, Installtion, Commissioning and training to be given at Insulation Lab, CPRI.</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.