

PROCUREMENT PROCEDURE OF CPRI (NON WORKS)

Revision No. : 04
 Dt of Revision : 27.08.2020
 Page No. : 1 of 4
 Section : Formats
 Topic : Technical Specifications format

Issue No : 2
 Issue Dt. : 30.06.2003
 Issued by : P A
 Documents : PPM
 FORMAT NO.:CPRI/PUR/eTBD/GTP

Section IV T - Technical Specification
 CENTRAL POWER RESEARCH INSTITUTE, BENGALURU/BHOPAL Web: www.cpri.in, www.tenderwizard.com/CPRI

Tender Enquiry No: CPRI/BLR20CDD01M640

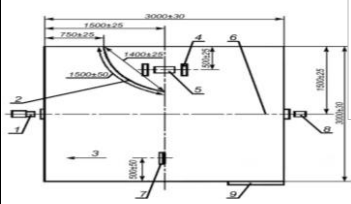
Description of the Equipment/Goods/Services: SMOKE DENSITY TEST APPARATUS AS PER IEC 61034

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 to be supplied : Cables Laboratory, Cables and Diagnostics Division, Central Power Research Institute, Bangalore				
2	Delivery period	6 to 8 weeks			
3	Scope (supply / supply & Installation / supply, installation & training) : Supply, Installation and commissioning SMOKE DENSITY TEST APPARATUS AS PER IEC 61034-1 & 2 and IS 10810 (Part-63)	1 No			
4	GENERAL : The Smoke Density apparatus as per IEC 61034-1 & 2 and IS 10810 (Part-63) is used for the measurement of the density of smoke emitted from electric or optical fibre cables burning under defined conditions. The measurements are made in terms of loss of light transmittance through a collected volume of smoke produced under controlled conditions. The apparatus should be constructed in such a way that the light transmittance & Optical density can be observed during the test continuously				
5	TECHNICAL -- CHAMBER DIMENSIONS: 1) The Chamber Shall comprise a cubic enclosure with inside dimensions of 3000 mm ± 30 mm X 3000 mm ± 30 mm X 3000 mm ± 30 mm 2) The chamber shall be made of minimum 2 mm thick powder coated G.I.Sheets to avoid rust formation and constructed on to a steel angle frame 3) The front side of the chamber shall have a door with a glass inspection window. 4) Transparent sealed glass inspection window of size 100 mm X 100 mm shall be provided on the two opposite side walls of the chamber to permit the transmission of a beam of light from the horizontal photometric system. The distance from the floor to the centre of these windows shall be 2150 ± 100 mm 5) The two opposite side walls of the enclosure shall include two orifices of area 25 cm ² ±5cm ² (one under the light source and one under the receiver) at ground level (not greater than 100 mm above the level of the chamber floor) for the passage of cables etc 6) A draught screen of 1500 mm± 50 mm long and 1000 mm ± 50 mm high shall be placed in the enclosure at the position show in the figure. It shall adjoin on the back wall (with a maximum gap of 10 mm) at a point 750 mm ± 25 mm from the side wall and shall				

Section IV T - Technical Specification
 CENTRAL POWER RESEARCH INSTITUTE, BENGALURU/BHOPAL Web: www.cpri.in, www.tenderwizard.com/CPRI

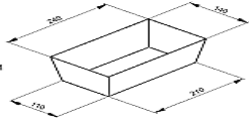
Sl.No.	Technical Specifications/Parameters	Qty	To be completed by the Bidder		
			Details of guaranteed technical parameters offered by the bidder	Guaranteed Technical Particulars (GTP)	Deviations from GTP
5	 <p>1- light source; 2 - air screen 1000x1500 mm; 3 - direction of air flow from the fan; 4 - cable support; 5 - pan with alcohol; 6 - optical axis height (2150 ± 100) mm; 7 - fan (air flow 7-15 m³ / min); 8 - photocell;</p>				
6	<p>PHOTOMETRIC SYSTEM :</p> <p>1) The photometric system consists of light source and a receiver with Recorder. The light source and the receiver shall be placed externally in the centre of both the transparent windows of the side walls of the cube without making physical contact, such a way the light beam shall traverse the cube through the glass windows of the side walls</p> <p>2) The light source shall be halogen lamp with tungsten filament with a clear quartz bulb & with the following characteristics Nominal Power : 100 W; Nominal Voltage : 12 V d.c ± 1V d.c; Nominal luminous flux: 2000 lm to 3000 lm; Nominal colour temperature : 2800 K to 3200 K</p> <p>3) The bulb shall be supplied with a voltage of 12 V ± 0.1 V (mean). The voltage shall be stabilized to a range of ± 0.01 V throughout the test.</p> <p>4) The lamp shall be mounted in a housing and the beam adjusted by a lens system to give an evenly illuminated circular area of 1.5 m ± 0.1 m diameter on the interior of the opposite wall.</p> <p>5) The receptor photocell shall be of the selenium or silicon type with spectral response equivalent to human eye. The photocell shall be mounted at the end of 150 mm ± 10 mm tube with a dust protection window at the other end. The inside of the tube shall be matt black to prevent reflections.</p> <p>6) The photocell shall be connected to a potentiometric recorder to produce a linear proportional output</p>				

PROCUREMENT PROCEDURE OF CPRI (NON WORKS)

Revision No. : 04
 Dt of Revision : 27.08.2020
 Page No. : 3 of 4
 Section : Formats
 Topic : Technical Specifications format

Issue No : 2
 Issue Dt. : 30.06.2003
 Issued by : P A
 Documents : PPM
 FORMAT NO.:CPRI/PUR/C/TBID/GTP

Section IV T - Technical Specification
 CENTRAL POWER RESEARCH INSTITUTE, BENGALURU/BHOPAL Web: www.cpri.in, www.tenderwizard.com/CPRI

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
7	<p>FUEL TRAY: The fuel tray shall be made up of Galvanized or stainless steel with jointed sealed edges, a trapezoidal trunk section as shown in figure. The dimensions are as given below Bottom Base : (210 ± 2) mm X (110 ± 2) mm ; Top Base : (240 ± 2) mm X (140 ± 2) mm; height : (80 ± 2) mm; Thickness of tray : (1± 0.1) mm. , Weight of the tray : 250 g (approx) A long handle manual igniter shall be provided for igniting the fuel. The tray shall be supported at a height of (100± 10) mm from the floor by an open sided frame work.</p> 				
8	<p>SMOKE MIXING FAN: A table type fan having a blade sweep of 300 mm ± 60mm and a flow rate of 7 m³/min to 15 m³/min, shall be placed on the floor of the cube in such way the fan axis being between 200 mm and 300 mm from the floor. The distance from the wall being 500 mm ± 50mm. Suitable flow measurement to be provided to measure the flow rate of the fan throughput. (For example : By Anemometer at the end of the tube having diameter of the blade sweep and of length about 1 m)</p>				
9	<p>SUPPORT FOR TEST PIECE: A flat horizontal unit which is placed symmetrically above the fuel tray by means of vertical supports equipped with horizontal brackets such that the vertical distance of the bottom of the test assembly from the bottom of the tray is 215 ± 5mm</p>				
10	<p>EXHAUST SYSTEM : The chamber shall be fitted with suitable motorised exhaust system & valve for extracting the smoke after completion of the test. The exhaust system shall be closed during the testing.</p>				
11	<p>Input Power Supply: Operating Input Power supply of 220V +/- 10% AC, Frequency 50 Hz +/- 3%.</p>				
12	<p>Data Acquisition System : The Apparatus shall have the facility for Data acquisition with suitable software and proper computer interface. The suitable software for recording the output of the photocell during the test and plotting the light transmittance data and optical density simultaneously against time. The software should automatically detect the end point of the test and minimum transmittance observed during the test. Desktop System requirements: (All in One Desktop PC) Monitor : 47 cm or larger(18.5 inch or larger) TFT/LED Digital Colour Monitor TCO-05 certified</p>				

PROCUREMENT PROCEDURE OF CPRI (NON WORKS)

Revision No. : 04
 Dt of Revision : 27.08.2020
 Page No. : 4 of 4
 Section : Formats
 Topic : Technical Specifications format

Issue No : 2
 Issue Dt. : 30.06.2003
 Issued by : P A
 Documents : PPM
 FORMAT NO.:CPRI/PUR/eTBD/GTP

Section IV T - Technical Specification
 CENTRAL POWER RESEARCH INSTITUTE, BENGALURU/BHOPAL Web: www.cpri.in, www.tenderwizard.com/CPRI

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
13	Environment-Operating conditions: Temperature, Humidity ----- Operation : Ambient to +40 °C ----- Relative humidity: Typical prevailing ambient humidity 30 to 85 % (non-condensing) • TEMPERATURE				
14	Essential Spares : The essential spares of 6 nos of bulbs, 2 nos of fuel tray for trouble free operation for two years				
15	Calibration : The neutral density filters, Anemometer shall be calibrated from ISO 17025 accredited laboratories. The calibration certificates shall contain the information uncertainty calculations and certificate traceable to international standards shall be supplied along with the instrument as per relevant standard. Fuel tray should be calibrated from ISO 17025 accredited laboratories for its dimensions Chamber dimensions to be demonstrated with calibrated measuring tane traceable to ISO 17025.				
16	Manuals : Relevant manuals/documents for operation and maintenance Two sets in English to be supplied (Hard copy) • Operation and maintenance • Drawings • Electrical / Instrumentation • Technical / Service manuals along with circuit diagrams Copy of software along with Software validation				
17	Installation & Commissioning : The system shall be commissioned at the laboratory of CPRI, Bangalore, by the Supplier. Necessary Logistics during commissioning and installation shall be arranged by the supplier.				
18	Acceptance tests at CPRI laboratory : Training of the complete operation of the equipment and controls of the system as per CPRI specification. Qualification of fire source to be demonstrated as per Cl.10.3 of IEC 61034(Part-1)				
19	WARRANTY : 2 years warranty from the date of installation & commissioning of the system				
20	After Sales Service Service : To be provided by local authorized agents for repair and maintenance in case of instrument breakdown or technical problems				

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 accredited agencies/facilities shall be submitted wherever applicable.
 3) CPRI reserves the right to conduct "pre-dispatch 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 least 70 days in advance.