Revision No. : 03 Issue No : 2

Dt of Revision : 25.07.2017 Issue Dt. : 30.06.2003

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Section : Formats Documents : PPM

Topic : e-Tender Technical Specification Document FORMAT NO.:CPRI/PUR/CTBID/GTP

**Section II - Technical Specification** 

CENTRAL POWER RESEARCH INSTITUTE, BANGALORE Web: www.cpri.in, www.tenderwizard.com/CPRI, Tele: 080-2207 2271

Tender Enquiry No.: CPRIBLR19ERED65C583

Description of the Equipment/Goods/Services: Peel test cum Lap shear strenght test apparatus

Note: 1) The Offers should be submitted only in this format otherwise the offer will be liable to be rejected.

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

Name of the Vendor					
Quotation Number and Date					
Sl.No.	Parameters	CPRI Specification / Requirements	Qty	To be completed by Guaranteed Technical Particulars (GTP)	the Bidder Specify deviations/ Remarks if any
1	Place where equipment /service to be supplied /provided	ERED, CPRI, Bangalore			
2	Scope	Supply, installation, commissioning and training.	1 Unit		
3	Pre qualification criteria	Vendor must have supplied PV related test equipment to other recognised laboratories.			
4	Introduction	This apparatus is constructed to meet the test requirement as per CL.10.25 and 10.26 of the standard IEC 61730-2:2016			
5	Equipment description	Test apparatus shall have two modes of operation as follows,  1. Peel test  2. Lap shear strenght test			
6	Peel test	Test is as per Cl. No.10.25 of IEC61730-2 :2016			

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Sl.No.	Parameters	CPRI Specification / Requirements	Qty	To be completed by Guaranteed Technical Particulars (GTP)	the Bidder Specify deviations/ Remarks if any
6.1	Test description	A tensile testing machine shall be placed vertically to apply upward pull force holding the test specimen firmy. Height of the machine shall be adjustable. Force applying part of the machine shall traverse upward with uniform rate of traverse. Force applied shall be recorded continiously and a graph shall be plotted between Peel off force (N/cm) and traverse distance (mm).			
6.2	Tensile-testing machine compliance	Complying with the requirements of ISO 5893			
6.3	Force measurement accuracy	Class 1			
6.4	Rate of traverse of the moving grip	50 mm/min ± 5 mm/min			

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6.5	Fixture for holding test specimen	For holding the test piece to the moving grip of the testing machine in a) so that the direction of pull to cause separation is at all times during the test $90^{\circ} \pm 10^{\circ}$ to the plane of the bond between the polymer and the rigid backsheet, i.e. making an angle of $90^{\circ}$ with the surface of the fixture.			
6.6	Force	Up to 200 N			
7	Lap shear strenght test	Test is as per Cl. No.10.26 of IEC61730-2 :2016			
7.1	Tensile testing machine compliance	As specified in ISO 4587:2003, Clause 4			

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Sl.No.	Parameters	CPRI Specification / Requirements	Qty	To be completed by Guaranteed Technical Particulars (GTP)	the Bidder Specify deviations/ Remarks if any
7.2	Test description	Test is carried out as per ISO 4787:2003. Test specimen shall be held firmly so that the force can be applied along the major axis of the test specimen. Machine shall operate at a constant speed so that the average joint will be brocken in a period of $65 \text{ s} \pm 20 \text{ s}$ .			
7.3	Force	Upto 400 N			
8	Other features	Control part of the apparatus shall be free to move without tensile testing machine part. (Both the part shall not be mounted rigidly-Refer Annex 1)			
		Tensile testing machine for Peel test and Lap shear strength test shall be mounted on different frames which are fixed on common base frame.(Refer Annex 1)			
9	User interface and control	Shall have 7" touch screen.			

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		USB connectivity to download logged data.			
10	Manual & Drawings	Manuals and drawings are to be provided with the equipment.			
11	Calibration and Traceable certificate	"NABL calibration certificate/Test documents issued by accredited Testing Laboratory accredited via APLAC, ILAC MRA" to include test certificate from accredited test laboratories worldwide. All testing and measurements should be according to IEC/ ISO 17025.			
12	Warranty	At least 1 year.			
13	Site Visits	The prospective bidders may survey the site and ask any clarification for sufficient understanding.			

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- 3) Pre-despatch Inspection & Training expenses shall be borne by CPRI. Information regarding the readiness of the equipment/machinery for the Pre-despatch Inspection should be communicated in writing by the supplier at least 70 (Seventy) days in advance, to obtain clearence from the Ministry, Government of India for deputation of nominated CPRI officers.

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Sl.No.	Parameters	CPRI Specification / Requirements	Qty	To be completed by Guaranteed Technical Particulars (GTP)	Specify deviations/ Remarks if any
14	Pre dispatch insection	Pre dispatch inspection shall be conducted by officials of CPRI at manufacturer site prior to dispatching of the item to CPRI.			
15	Training	Training shall be provided to officials of CPRI after installation.			
16	Any other additional items	Any other items which are needed to complete the scope of work should also be mentioned in the tender document.			

PN: 1) Bidder shall indicate complete details/information how the CPRI GTP are complied with against each and every specification parameters & mere statement of 'complied' do not suffice the requirement.

- 2)A detailed technical/catalogue/literature/phamplet and any other details shall be submitted in hard copy in a sealed cover superscribing enquiry number and due date so as to reach the following address within the due date and time.
- 3) The Indian representative of the foreign/overseas firms shall submit the Letter of Authorization issued by their principals.

4) The bidder shall submit the quotation / offer in the above prescribed format of Section IA, IB and II only. Informations any other forms shall shall be rejected.

Address: Joint Director (Purchase), Purchase Authority, Central Power Research Institute, Sadashiva Nagar P.O., P.Box.No.8066, Bengaluru-560 80.

Telefax: 080-2207 2010., email: purchase@cpri.in , web: www.cpri.in