

PROCUREMENT PROCEDURE OF CPRI (NON WORKS)

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Section IV T - Technical Specification

CENTRAL POWER RESEARCH INSTITUTE, BENGALURU, www.cpri.res.in.

Tender Enquiry No : CPRI/BLR22MED13M1094

Description of the Equipment/Goods/Services : SUPPLY, INSTALLATION, COMMISSIONING & TRAINING OF 600 kN UNIVERSAL TESTING MACHINE
 Note : 1) The technical bid submitted in other than this format is liable to be rejected.

2) All fields are mandatorily to be filled in.

Name and address of the bidder

Quotation Number and Date

Sl.No.	Technical Specifications/Parameters	Unit	Specification	Qty	To be completed by the Bidder		
					Details of guaranteed technical parameters offered by the bidder	Guaranteed Technical Particulars (GTP) Mention Complied/ Not Complied	Deviations from GTP
A.	600 kN Universal Testing Machine			ONE			
1	Capacity	kN	600				
2	Construction	--	Front loading with four columns & two lead screw columns				
3	Load Accuracy (%) / Class	±	Better than ±0.5% of measured value between 2-100% in each sub-ranges per IS 1828 : Part 1 : 2022/ISO 7500-1 : 2018				
4	Load Resolution	--	1:200000 of machine capacity				
5	Logic	--	Vertical / Servo Hydraulic				
6	Test Method (programmed)	--	National / International Standards				
7	Measurement	--	PC Based				
8	Control Modes	--	Load Control				
	(Metallic & Non-Metallic materials)	--	Stress Control				
		--	Strain Control				
		--	Displacement Control				
		--	Load Hold mode (short duration)				
		--	Both Manual and automatic computer control				
9	Control Mode Precision	%	1 (from 5 to 100% of load capacity)				
10	Machine Controller	--	Standalone controller Interfaceable to PC with Data trasfer Rate 50Hz.				
11	Test Speed	mm/min	0.5 to 100				
12	Stress Control range	N/mm2	1 to 60				
13	Strain Control range	per/s	0.00025 to 0.0025				
14	Clip on Type Extensometer						
	Accuracy (%)	±	0.5				
	Gauge length	mm	50				
	Extension Range	mm	5				
15	Encoder	--	Integrated displacement photoelectric / rotary encoder or equivalent or better with Resolution of 0.01 mm				
16	Clearance for Tensile Test	mm	50 to 800				
17	Clearance for Compression Test	mm	0 to 450				
18	Clearance between columns	mm	450				
19	Ram Stroke	mm	250				
20	Tension Test Clamping grips (flat & round)	mm	5 to 40				
21	Compression test plate diameter	mm	120				
22	Bend Test	--	3 point loading (250 mm span)				
23	Shear load tests (Single & Double)	--					
	Single & Double Shear diameter	mm	5 to 25				
	Length of specimen	mm	upto 150				
24	Standard fixtures	--	One set				
25	Standard Tools	--	One set				
26	Grips	--	Front open with one powerpack for both machine & hydraulic grips movement)				
27	Load measurement	--	through 600 kN capacity load cell				
28	Remote control facility	--	to operate hydraulic grips, cross head using same powerpack				
29	Safety protection	--	for over load & displacement				
30	Computer specification	--	Intel i7 processor(min), 16 GB RAM, 1 TB Hard Disk, DVD Re-Writable, Monitor 22 / 24 inch				
31	Printer	--	Laser Jet Color Printer, A4 size				
32	UTM Software features	--	Calibration through software, storage of calibration values & retrieval				
33	Standard Accessories	1 Set	Tension Test (open front hydraulic wedge grips for round/flat specimen 5-40mm.				
		1 Set	Bending attachment for 3-point loading with span 250mm & punch head diameter 50mm				
		1 Set	Compression Test Fixture (Pair of compression plate dia 120mm)				
		1Pc	Electronic clip on extensometer				
		1 Set	High precision photoelectric encoder				
	1 Set	Computer System with Wondows 10(OS) with suitable software.					
B.	Other Mandatory requirements:						
1	The machine shall be calibrated in accordance with IS 1828 : Part 1 : 2022/ISO 7500-1 : 2018.						
2	One year on-site comprehensive warranty from the date of successful commissioning.						
3	Two year maintenance contract after the expiry of warranty period						
4	Machine Specification Catalogue with two sets of Operation, Maintenance & Training Manuals						
5	The machine shall be supplied with all standard accessories.						
6	The Installation & Commissioning shall be done under the supervision of CPRI						
7	Hands on Training for personnel(s) authorized by CPRI.						

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/facilities 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 least 70 days in advance.