

## PROCUREMENT PROCEDURE OF CPRI (NON WORKS)

Revision No. : 03  
Dt of Revision : 25.07.2017

Issue No : 2  
Issue Dt. : 30.06.2003  
Issued by : P A  
Documents : PPM

Section : Formats  
Topic : e-Tender Technical Specification Document

FORMAT NO.:CPRI/PUR/eTBID/GTP

## Section II -Technical Specification

CENTRAL POWER RESEARCH INSTITUTE, BANGALORE Web: www.cpri.in, www.tenderwizard.com/CPRI, Telefax: 080-2207 2010

Tender Enquiry No.: CPRIBLR20MED43M589

Description of the Equipment/Goods/Services: Earthing System and Surge Protection Devices

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.

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 clearance from the Ministry, Government of India for deputation of nominated CPRI officers.

Name of the Vendor

Quotation Number and Date

Sl.No.	Parameters	CPRI Specification / Requirements	Unit	Qty	To be completed by the Bidder	
					Guaranteed Technical Particulars (GTP)	Specify deviations/ Remarks if any
I	Supply, Installation & Commissioning of Earthing System for TTS Control Room & Tower Crane					
A	Earthing System for TTS Control Room					
1	Chemical earthing with suitable 25 / 50 kg per pit (Earth conductivity enhancing compound), Low carbon copper coated earth rod of 3meter electrode having diameter of 20 mm with copper coating thickness of atleast 250 microns provided by welding to connect rod with flat conductor. The above arrangements shall be provided with heavy earth champer for safety of earthing system. <b>For Control panel</b>	Nos	3			
2	Laying 25 x 5 mm copper stripe in surface/trench.	Mtrs	45			
3	Providing of Sleeve suitable for above said stripe.	Mtrs	30			
4	Providing and making for earth excavation for laying GI / copper stripes.	Mtrs	20			

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					Guaranteed Technical Particulars (GTP)	Specify deviations/Remarks if any
B	Earthing System for Tower Crane					
1	Chemical earthing with suitable 25 / 50 kg per pit (Earth conductivity enhancing compound), Low carbon copper coated earth rod of 3meter electrode having diameter of 20 mm with copper	Nos	3			
2	Laying 50 x 5 mm copper stripe in surface/trench.	Mtrs	65			
3	Laying of 50 x 5 mm GI stripe in surface/trench.	Mtrs	65			
4	Providing of Sleeve suitable for above said stripes.	Mtrs	100			
5	Providing and making for earth for existing trench/excavation for laying GI/copper stripes.	Mtrs	100			

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					Guaranteed Technical Particulars (GTP)	Specify deviations/ Remarks if any
C	Mandatory Requirements:					
1	All General requirements shall be in accordance to IS 3043: 2018					
2	The successful bidder shall take prior approval of the earth pit design / layout before commencement of work from CPRI.					
3	The earth resistance measurement after completion of work will be checked by CPRI.					
	The acceptable minimum resistance shall be less than 2 ohms					

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Sl.No.	Parameters	CPRI Specification / Requirements	Unit	Qty	To be completed by the Bidder	
					Guaranteed Technical Particulars (GTP)	Specify deviations/ Remarks if any
4	Supplier / Manufacturer's self certification is required.					
5	Warranty for a period for One year is required.					
D	<b>Other Important Notes:</b>					
1	The Scope of work is for Supply, Installation & Commissioning					

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					Guaranteed Technical Particulars (GTP)	Specify deviations/ Remarks if any
2	The offer shall be submitted seperately for each category of work.					
3	The supplier can visit the site at CPRI, Bengaluru for any clarification before submitting the offer.					
II	Supply, Installation & Commissioning of Surge Protection Device for Tower Crane					
A	Surge Protection Device	3-Pole + NPE, AC, MOV with built in thermal fuse		3		
1	Nominal voltage	230	V			

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					Guaranteed Technical Particulars (GTP)	Specify deviations/ Remarks if any
2	Type	1+2				
3	Class	I-III				
4	Lightning protection zone	0 to 2				
5	Impulse discharge current (10/350)	7	kA			
6	Total discharge current (10/350)	25	kA			
7	Nominal discharge current (8/20)	30	kA			
8	Arrestor surge current (8/20) [total]	120	kA			
9	Maximum discharge current (8/20)	50	kA			

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					Guaranteed Technical Particulars (GTP)	Specify deviations/ Remarks if any
10	Voltage protection level	<0.9	kV			
11	Response time	<25	ns			
12	Maximum back-up fuse	160	A			
13	Temperature range	minus 40 to max 80	°C			
14	Protection rating	IP20				
15	Max. Back-up fuse / MPCB	Up to 160 amps max or depending up on panel design & breaking capacity.				
B	Surge Protection Device	2-Pole, AC/DC, MOV with built in thermal fuse		1		

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					Guaranteed Technical Particulars (GTP)	Specify deviations/ Remarks if any
1	Nominal voltage	230	V			
2	Type	3				
3	Class	III				
4	Lightning protection zone	2 to 3				
5	Nominal discharge current (8/20)	1	kA			
6	Maximum discharge current (8/20)	2	kA			
7	Rated current	20	A			
8	Protection level wire - wire	<160	V			

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					Guaranteed Technical Particulars (GTP)	Specify deviations/ Remarks if any
9	Protection level wire - earth	<1200	V			
10	Response time	<25	ns			
11	Temperature range	minus 40 to max 80	°C			
12	Protection rating	IP20				
13	Max. Back-up fuse / MPCB	Up to 160 amps max or depending up on panel design & breaking capacity.				
C	Mandatory Requirements:					

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					Guaranteed Technical Particulars (GTP)	Specify deviations/ Remarks if any
1	All General requirements shall be in accordance to DIN EN / IEC 61643-11					
2	Supplier / Manufacturer's self certification is required.					
3	Warranty for a period for One year is required.					
D	<b>Other Important Notes:</b>					
1	The Scope of work is for Supply, Installation & Commissioning					

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2	The supplier can visit the site at CPRI, Bengaluru for any clarification before submitting the offer					

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 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