



प्रसारभारती / PRASAR BHARATI
भारतीयलोकसेवाप्रसारक / INDIA'S PUBLIC SERVICE BROADCASTER
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सत्यम् शिवम् सुन्दरम्

F.No. J-11012/3/2026-DD PROJ-ADG(E)-(SZ) E.345643

Dt: 14.07.2026

Sub: Request for Budgetary quote for SITC Of Conventional Type Copper Plate Earthing System for Power Supply System at GDDRC, Hyderabad **from vendors / OEM - Reg**

Sir/Madam,

It is hereby requested for the SITC Of Conventional Type Copper Plate Earthing System for Power Supply System at GDDRC, Hyderabad from Vendors/OEM.

The budgetary quote for the above SITC may kindly be provided by email to **tvproject_sz@yahoo.com** on or before **21.07.2026**.

Encl: Technical Specification for Earthing System.

भवदीय /Regards,

R. N. M.
40/26

(पी.एन.एम. श्रीनिवास/ P.N.M. Srinivas)

ए डी ई - टी वी पी/ADE-TVP

कृतेअपरमहानिदेशक (प्र.सं.)(द.क्षे) / for ADG(BO)(SZ)

TECHNICAL SPECIFICATIONS FOR SITC OF CONVENTIONAL TYPE COPPER PLATE EARTHING SYSTEM AT GDDRC HYDERABAD and DESCRIPTION of STORES

SCOPE OF WORK :

Supply, Installation, Testing and Commissioning (SITC) of Earthing System 15 no's for Geo Diversity Disaster Recovery Centre at Hyderabad as per specification and drawing.

A) Detailed Specification of Copper Plate Earthing:

I) The location of the Earth Pits will be identified by the **Installation Officer**.

II) At GDDRC site Copper Plate Earthing System has to be carried out as below:

i) **15 Nos of Copper Plate earthing** in one site have to be carried out for HT Power Supply Equipments at the locations as per specification and Installation Officer's instructions.

ii) From the earthing indicated by the installation officer, one length of copper strip of Size 50 mm x 3 mm with high insulation PVC Sleeve should be routed underground, 300 mm below ground level from the earthing system to

1) 500Kva Transformer --- 8 Nos (Indoor)

2) HT Switch Gear --- 2 Nos (Indoor)

3) RMU --- 2 Nos (Outdoor)

4) 4 pole Structure --- 3Nos. (Outdoor)

iii) Terminations of respective Earthings, to be carried out as instructed by Installation officer,

Laying of copper strip has to be carried out with high insulation PVC Sleeve routed underground 300mm below the ground level to the respective power supply

III) Specification of Copper Plate Earthing: Refer Drawing at Annexure -II

Sl. No.	Description	Department Specification
1	Removal of Earth from Ground Level & digging of Earth Pit.	Size of Earth Pit: 750x 750 x 3000 mm(LxWxD)
2	Fabrication of Earth Electrode. (Copper plate of size 600x600x3 mm and copper strip of size 50mmx3 mm shall be supplied by the TENDERER)	First Copper plate of Size 600mm x 600mm x 3mm has to be connected to Two nos. of copper strip of size 50mm x 3mm x3000mm with steel bolt,nuts and washer 6mm x18mm on the opposite sides, later all the joints to be copper Brazed or brass Brazed as shown in Earthing Drawing, Annexure –II
3	Provision of holes and fixing of funnel to the 50 mm GI Pipe & Connecting of Earth Conductor. (Copper strip of size 50x3 mm dual run and 50mmGI Pipe class ‘C’ shall be supplied by the tenderer at site.)	1) Provision of holes of 12mm Dia, in Zig Zag fashion, spacing 15cm apart, starting from the bottom up to height of 3metre in the 50mm GI pipe. The GI Pipe should have clean surface, not covered by Enamel or Poorly conducting material. 2) The two copper electrodes of size 50mm x 3mm that are brazed to the copper plate at the bottom are to be fixed to a copper strip (Size 50x 3mm) at the top. The center of the 50mm x 3 mm copper strip is to be joined to the copper flat over the 50 mm GI pipe with SS bolt,washer & nut . 3). A 50x3mm copper strip (length as per the site requirement) to be connected with the 50x3mm copper flat by 10mm SS bolt, nut and washer. The 50x3mm running length copper strip inserted with high insulation PVC Sleeve should be layed 300mm below the ground. 4)A GI funnel of suitable size to pour water into the Earth Pit is to be welded/mounted through the threaded coupling
4	Construction of Earth Pit	1)After integrating GI Pipe, Copper Plate and Copper Strips as described above and as shown in Annexure –II, the entire

		assembly has to be installed in the Earth Pit. Then the Earth Pit has to be filled with alternate layers of Charcoal, Sand and Salt (each layer of 200 mm depth) up to the height of 3000 mm (from the bottom of the pit to the top).
5	Construction of Masonry Work	1) Masonry brick work of a height of 600mm has to be constructed with MS Angle Iron Frame at the top. A CI [Cast Iron] lid of size 450mm x 450mm with suitable handle and hinges is to be provided. 2) 50 mm cylindrical holes all around the concrete enclosure for seepage of water into the earth pits from surrounding area to be provided 3) 4" – 6" thick sand layer around the masonry work for facilitating ingress of filtered rainwater to be provided.
6	Measurement of Earth Resistance.	1) After completion of the Earthing System, a complete set of Measurements have to be taken using standard Earth Tester in the presence of Installation Officer. 2) The value of the Earth Resistance should be Less than One Ohm.
7	Providing water Pipeline	Providing water Pipe line to Individual Earth Pit from water source available at site.

NOTE:

A) Copper purity Certificate for 99.95% should be submitted to the Installation officer before starting the work at site.

B) Guarantee / Warrantee: One year from the date of completion of the work.

C) Payment terms :100% will be paid on satisfactory completion of the work.

D) Eligibility Criteria :

- i. The bidder should have carried out Earthing in the past 5Years. **Completion certificates of such works carried out for any Government Department/PSU's shall be enclosed in the Technical Bid.**

- ii. **Such works must have been directly carried out for clients; Works undertaken as subcontract will not be considered.**

Additional terms and Conditions

- 1. Copper Plate should be of Electrolytic Copper of 99.5 % putity*
- 2. Copy of purity test certificate should be attached along with dispatch.*
- 3. Copper Strips be supplied in 40 Kg/50 Kg/ 60Kg breakup only*
- 4. A sample from the material supplied shall be tested for purity at NABL/Govt labs before acceptance.*
- 5.All the necessary material & works required for the completion of Earth Pits should be provided by the Tenderer.***

Schedule of Requirement

Copper Plate Earthing -15 Nos.

Technical specification for Copper Plate (600mm x 600mm x 3 mm)		
Specification	Specificaton Name	Bid Requirements
Copper Plate (600mmx600mmx3mm)	Thickness of Plate	3.0 millimeter)
	Length	600 millimeter
	Width	600 millimeter
	Surface Area of Plate (sq meter)	1.15-1.120, (0.7272 Sq m)
	Material of Plate	Copper
	Weight of Plate	10.0 Kg
	Shape	Square
	Warranty	1.0, 3.0 (Year)
	Condition for Material	HH
	Purity	Electrolytic copper 99.95% Purity

Technical Specification for Rolled Copper Strips 50 mm x3 mm		
Specification	Specificaton Name	Bid Requirements
Copper Strips 50mm x 3mm	Width	50 mm
	Thickness	3 mm
	Length	1 Meter
	Conformity Specification	BS 2870
	Grade Temper	Grade A1
	Designation	C102
	Finishing	Cold Rolled
	Condition for Material	HH
	Purity	Electrolytic copper 99.95% Purity
	Packing	Coil/ Reel

Technical Specification for GI Pipe		
Specification	Specificaton Name	Bid Requirements
	Diameter	50 mm
	Length	3 Meter
	Wall Thickness	3.6 mm
	Galvanization Thickness	70 Micron
	Condition of material	Heavy Duty
	Specification	Class C

Bill of Material

Sl. No.	Material	DD's Requirement
1.	Excavation of earth Pits and filling with Charcoal, Salt and Sand including Fabrication, brazing charges.	15 Nos
2.	Copper Plates (600mm x 600mm x 3mm)	15 Nos.
3.	Copper Strip (50mm x 3mm) Laying with sleeves and Termination	As per actuals (rate should be quoted per Meter)
4.	Earth pit chambers (600mm x 600mm x 300mm) Lid (450mm x 450mmx 10mm) cast iron lid	15 Nos.
5	GI Pipe (50mm Dia x 3 Mtr) with funnel	15 Nos.
6	Water pipeline for all the earth pits from water source.	As per actuals (rate should be quoted per Meter)