

MAHARASHTRA STATE ELECTRICITY TRANSMISSION CO.LTD
(CIN No.U40109MH2005SGCI53646)

Office of the Executive Engineer

EHV O & M Division-I, Pune

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EE/EHV O&M Dn.-I/Pune/Tech./ 1318

Date :02.08.2023

TO WHOM SO EVER IT MAY CONCERN

This office intends to carry out the Health Analysis of existing Earthing System at 132kV Mundhwa S/S, under EHV O&M Division-I, Pune, as per the applicable standards viz IEEE 80, IEEE81, BS 7430, IEEE 1100, IS 3043 and the guidelines of CBIP Manual. **The scope of work is as below.**

1. To conduct survey of 132 kV Mundhwa substation switch yard premises for its soundness with reference to earthing.
2. To check the adequacy of existing earthing system with respect to corrosion, joint tightness, riser integrity, weeding, top layer condition etc as per IEEE 80 and 81 Standard.
3. To check the cross section of the earthing system for the projected level of fault current as per standards.
4. To check the adequacy of surface area of metal in touch with soil for the portion of the fault current that is routed through the ground as per the Standards.
5. To conduct extensive soil resistivity study using Wenner 4-point method in the switch yard as per the Standards.
6. To measure existing Earth pit resistance value using Wenner 3 point method / stakeless method based on feasibility.
7. To check the Riser integrity by current injection method as per IEEE 81 2012.
8. To check the integrity i.e. physical condition of existing rods, earth pits, risers, inter grid connectivity, aging etc of existing earthing arrangement.
9. To simulate the Step and Touch potential graph of existing grid for ascertaining the safe & unsafe location of the switch yard as per the Standards.
10. Verification of earth mat with reference to fault level of switch yard and also with reference to most sensitive earthing of costly equipment.
11. To list out most economical solution / method to revamp the switch yard earthing system to achieve a safe earthing system.
12. To carry out the analysis of data using CDEGS software, modeling the existing earth mat with electrode, modeling the measured soil resistivity in required number of layers.

13. Submission of detail report of all the above mentioned activities with photographs in soft & hard copies.

All interested are requested to submit their best offer for above mentioned work on Email Id - ee6140@mahatransco.in along with SAC code and applicable rate of GST & LC if applicable for above work on or before 08.08.2023 in following format.

Particulars	Unit	Rate in Rs.	GST in %	SAC/HSN code	Amount in Rs
Work of Health Assessment of grounding system & soil resistivity measurement (Earthing Audit)Covering following Tests, along with details a) Soil Resistivity Test b)Earth Electrode Resistance Test c) Riser Integrity Test d) Grid Integrity Test e) Touch & Step Potential Test f) Effect of corrosion Test g)Software simulation & design adequacy h)Submission of Evalutation Report					
1) 132 kV Mundhwa Substation.	No.				

This Budgetary offer is invited only for the estimation purpose and same will not be considered for any bidding OR other activity. The offer shall be valid for minimum 90 days period.

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(V.V.Borkar)
Executive Engineer
EHV O&M Div-I, Pune