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Power Grid Corporation of India Limited
Specification for 33 kV Distribution Works under Comprehensive Scheme for Strengthening of
Transmission & Distribution system in NER Intra State - Arunachal Pradesh
Volume II - Technical Specifications

1.7.1. TYPE OF POLES

Steel tubular pole (As specified in the BPS) shall be used for 33kV Lines. The specification for poles is enclosed in subsequent section-IV.

However, for high way crossing rail pole of **suitable** length may be adopted if required.

1.7.2. EXCAVATION OF PITS

1.7.2.1. The planting depth of pole over the base concrete should be as per IS-1678.

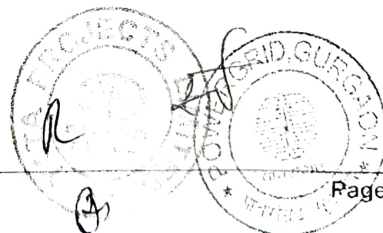
- Excavation cost for pits shall be included by the contractor in the bid for all type of soil following type of soils including hard rocks. This include dewatering of pits and shoring and shuttering wherever necessary. No separate claim for dewatering during excavation, shoring and shuttering shall be entertained.

1.7.2.2. Controlled blasting shall be permitted only in case of hard or rocky soil. The contractor shall be responsible for any damage or accidents arising out of the process of blasting. Blasting is not permitted if the area around location is inhabited. In such case, the contractor shall have to follow other methods like drilling etc.

1.7.3. FOUNDATION

The foundation of poles shall be of Concrete type

The bidder shall quote their rates as per the quantities mentioned for foundations in the BPS. The pole erection rate shall include excavation in all types of soil/rock, back-filling of the foundation pole as specified, cost of all materials, labour etc.





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MS base Plate of size 300mm x 300mm x 6mm shall be welded to the bottom of the MS Poles.

1.7.3.1. CONCRETE FOUNDATION

The PCC foundation shall be of size 600 mm x 600 mm x Pole Planting depth. The PCC of 1:3:6 (M10 grade) shall be used for foundations and as defined under clause no.1.9.4.2 and also for special foundations. Excavation size of pit shall commensurate with the foundation size stated above. Size of base plate will be as explained above. However, supporting design calculation may be furnished during detailed engineering. **Muffling shall be provided above ground level for M.S. Poles.**

It is envisaged that 33kV may be traversing marshy & low laying area for which special type of foundation shall be required. In such a case, difference in excavation quantity, concreting & reinforcement between special foundation and normal foundation shall be paid extra as per State Schedule of Rate applicable on the date of bid opening.

1.7.4. ERECTION OF POLES

The poles are to be erected in alignment with utmost care. The poles shall then be lifted to the pit with the help of wooden supports. The pole shall then be kept in the vertical position with the help of 25 mm (min.) manila ropes which shall act as the temporary anchor. The verticality of the pole shall be checked by spirit level in both longitudinal & transverse directions. Once, this is done, the back filling/concreting shall be done in the pit as per requirement. The temporary anchor shall be removed only when poles set properly in the foundation.

1.7.5. FOR 33 KV LINE

- Cross Arm for 33 kV line: The contractor shall supply & install "V" Shape cross arm as per REC Construction Standard M-1.
- Back Clamp for "V" cross arm: The contractor shall supply Back Clamp for "V" cross arm as per REC Construction Standard K-2 and use it to install the cross arm.
- Pole Top Bracket: The contractor shall supply & install Pole top Bracket as per REC Construction Standard M-4.

