EARTH MAT AND TAILS

21. Isolator and earthing switch drive shafts are to be earthed through a flexible copper strap connected between a point just above the mechanism box and the steel support structure. Pantograph isolator drive shafts (Rotating not more than 90º) are to be earthed through a flexible copper strap connected between the drive shaft/insulator flange and the steel support structure.
Where the drive shaft rotates more than 90º a method of earthing will be specified to suit such cases individually.

22. Flexible protective earth connections to equipment must be either of braided copper or of finely stranded copper wire with green/yellow insulation. The rated conductor area shall not be less than one half of the main conductors feeding the equipment with a maximum of 70 (75) mm^2. The length of such flexible connection shall not exceed 1000mm.

23. Two external earths on LV motors are not necessary. One earth via a fourth cable core or one visible external earth is sufficient.
For large motors (MV + LV) local earthing via flexible earth connection is required.

24. Earthing requirements for equipment such as metalclad SF_6 switchgear installation, phase isolated busbars and generators will be shown on detailed project drawings.

25. Typical earth strap details for Power Stations are covered in the appropriate information manuals.

26. YARD STONING

As indicated in S.L.D.G. 13-1, the surface resistivity plays an important part in ensuring the safety of personnel as required by the O.H.S. act.
H.V. Yards should have a stone layer of at least 100mm thick to achieve safe "STEP AND TOUCH" potentials.
This stone layer should be formed from clean, hard, sound crushed stone of 26,5mm nominal size as approved by ESKOM.
The final installation should be verified by testing for safe "STEP AND TOUCH" potentials.

THE C.A.D. REFERENCE NUMBER IS:
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ESKOM

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EARTHING STANDARDS

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