ΑΔΜΗΕ

January 1999

TECHNICAL DESCRIPTION TD-20

TINNED COPPER STRIP & GROUND ELECTRODES

I. TINNED COPPER STRIPS REQUIRED CHARACTERISTICS

The strips shall be of electrolytic annealed copper. Copper strips shall have a minimum cross section of 25 x 4mm and 40 x 4mm or equivalent subject to purchaser's approval.
Copper strips shall be hot dip tinned and shall be delivered in length not less than 25m.
Tinning of copper strips shall be with such a way that no discontinuity in the tinned surface is observed.

1. Tests

a. Dimentional test. The permissible width tolerance is ± 1% and for the thickness is ± 2%.

b. Measurement of the resistivity. Shall not be greater than 0.0176 ohm · mm^2 / m.

c. Tinning test according to the latest revision of ASTM B-33 Standard.

2. Additional information

Information about grounding system of the 150 / 15kV substation is given by SS-138 Specification of IPTO.

3. Packing

Ground copper strips shall be delivered packed on wooden palettes with 800kg maximum weight.

II. GROUND ELECTRODES REQUIRED CHARACTERISTICS

Ground electrodes shall consist of galvanized 2" steel pipes, 3m long and 5mm thickness (thickness of the pipe wall).

At the one end of the pipe and at a distance of about 50mm from this end, a tinned copper plate must be properly welded. The tinned copper plate shall be of the following dimensions : 180x 180 x 7mm (see drawing 1).

The other end of the pipe must be shaped in such a way so that it can be driven easily into the ground.

The galvanized steel pipes shall have thirty (30) holes on their surface. The diameter of these holes shall be 12mm.