Successive Imaging Technique for Field Distribution Around Conductors Above a Two-Layer Earth

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Abstract:

The present work aims at developing a method for assessing the electric field around a charged conductor positioned in air (of zero conductivity) at a given height above a two-layer earth. The method is based on the successive imaging technique. With the knowledge of the image charges, the electric field in air and earth are assessed. An electrolytic-tank model was constructed to simulate a line conductor above a two-layer earth. The measured electric fields agreed with those calculated for one and two-layer earth models.

Keywords:

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