Electric Field Calculation on Six phase Overhead Transmission Lines.

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Abstract:

Six phase power transmission has many advantages over the conventional three phase techniques. It offers an improvement in space utilization, low noise levels, high reliability and reduction in corona effects. To study and analyze the corona in six phase transmission lines, the field calculations are required as a first step. The authors describe a method to calculate the electric field in the vicinity of HV six phase transmission line conductors. The electric field is calculated at any point in the space surrounding the six phase line. The lateral distribution of the field over the ground surface and underneath the conductors of six phase HV transmission lines is calculated. The effect of different gap parameters is also studied. (10 refs.)

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