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of Soil; 2.1.4 Frequency Characteristics of Soil Parameters; 2.2 Basic Properties of a Constant Current Field in the Earth; 2.2.1 Current Density in the Earth; 2.2.2 Continuity of Earth Current Field; 2.2.3 Potential of Stable Current Field; 2.2.4 Current Field at the Interface of Layered Soil; 2.3 Current Field Created by a Point Source in Uniform Soil; 2.3.1 Laplace's Equation; 2.3.2 Current Field Created by a Point Source in Soil
 2.3.3 Earth Current Field Produced by Two Opposite Point Current Sources on the Ground Surface
 2.3.4 Earth Current Field in Non-Uniform Soil; 2.4 Potential Produced by a Point Source on the Ground Surface in Non-Uniform Soil; 2.4.1 Horizontally Layered Soil; 2.4.2 Horizontal Double-Layer Soil; 2.4.3 Horizontal Triple-Layer Soil; 2.4.4 Vertically Layered Soil; 2.5 Potential Produced by a Point Source in Multi-Layered Soil; 2.5.1 Analysis of Potential Produced by a Point Current Source; 2.5.2 Numerical Integral Method to Calculate Green's Function of a Point Current Source
 2.6 Computer Program Derivation Method of Green's Function
 2.6.1 Method of Obtaining Analytic Expression; 2.6.2 Expression of Green's Function Derived from Software Program; 2.6.3 Calculation of Current Field in Multi-Layered Soil; 2.7 Fast Calculation Method of Green's Function in Multi-Layered Soil; 2.7.1 Development of a Two-Stage Fitting Method; 2.7.2 Application of the Fast Calculation of Green's Function in Multi-Layered Soils; 2.8 Current and Potential Distributions Produced by a DC Ground Electrode; 2.8.1 Current and Potential Distributions of DC in Uniform Soil
 2.8.2 Current and Potential Distributions of DC Current in Non-Uniform Soil

Sommario/riassunto

Grounding is the fundamental measures to ensure the safe operation of power systems, including power apparatus and control/monitoring systems, and guarantee the personal safety. Grounding technology is an interdisciplinary involving electrical engineering, high voltage technology, electric safety, electromagnetics, numerical analysis, and geological exploration Methodology and Technology for Power System Grounding: Covers all topics related to power system groundingPresents fundamentals and theories of grounding systemsWell balances technology a