ABSTRACT

Electrical Impedance Tomography (EIT) is a method for imaging the electrical resistivity distribution of an object by measuring the potential difference. This study examined the application of electrical tomography for determining the resistivity distribution objects on vertical surfaces below ground, using electrodes arranged on three sides of the surface in planar configuration-2 D. Model-based algorithm is used for determining image reconstruction, using the finite element method to calculate potential distribution of the object boundary and Newton-Raphson method for measuring the resistivity distribution.

Keywords: *electrical impedance tomography, planar configuration, finite element method, Newton-Rhapson method*