Abstract

Induced Current Electrical Impedance Tomography (ICEIT) is one of several techniques for non-destuctive image reconstruction of an object. The image reconstruction is done by mapping the internal conductivity of the object. Therefore it is necessary to measure the voltage of the object boundary with an amount of electrical current flowing in the object. The current in the object is generated from a magnetic field induced by a coil with current. In order to get a good mapping, the induction process must be occured in several part of the object. Thus, the coil must be moved to several place in the measuring process. This research is focused on designing and building a tools that will be able to move the coil with precise and fast postioning so that the measuring process will be efficient. Using the proportional control system, the designed tools has the precision up to 91% with 4.93 settling time.

Keywords: *ICEIT, tomography, NDT, proportional control, precision*