

ABSTRACT

The need for testing to identify without damaging the system is the Non-destructive Testing method. Non-destructive Testing is a test method used to identify anomalies in an object without damaging the material or system without disrupting the usefulness and performance of the system. In this study, anomaly identification will be carried out on the ground object using a multicoil (nine coil) cylinder implementation with a 3x3 coil matrix configuration with a distance of 1.4 cm between coils, through stress difference analysis on each receiver coil. The design of tools in the form of a multicoil system will identify anomalies found in the soil. Then some parameters will be obtained from the results of the identification process research carried out by reviewing two conditions, namely when the anomaly is located under the induction coil system. This study uses the parameters of ac current variations from the function generator as input which are induced in one coil that acts as a transmitter and eight other coil as receivers that produce the output voltage obtained through reading using a multimeter.

Keywords: Non-destructive Testing, Coil Configuration, Anomaly.