

ABSTRACT

Non destructive testing (NDT) is the activity of testing or inspection of an object to determine the existence of damage, discontinuity, or, content of other materials in an object without damaging the object we are testing or inspecting. . Often this technique is used for identification purposes in certain fields, one example is the field of exploration. Many ways to be able to identify, one of them is by using multicoil which was done in this study. This multi-coil design will identify the object to be tested, then there will be data in the form of electromotive force (GGL). In testing, multicoil design uses a different configuration of transmitter coil so that the maximum GGL can be obtained later to detect the presence or absence of an anomaly at the time of testing. The identification process is carried out by reviewing the two conditions, namely when the anomaly is in the form of an iron plate and also an anomaly in the form of 1000 rupiah coins. The results of this study can identify the presence or absence of anomalies in the form of iron metal plates and coins in the 1000 rupiah fraction buried inside soil using the induction method. A multicoil configuration that has a 3.3 cm transmitter size results in a greater induction GGL compared to using a 2.2 cm transmitter diameter size because the distance between the transmitter and receiver coils is getting closer together due to the flux that is getting bigger due to the induction current that impacts the object.

Keywords: Non destructive testing (NDT), Electricity Motion (GGL), Multicoil, Anomaly