

ABSTRACT

Testing a material is an identification process to detect the content of a material, the amount of content, and the position of the material content in an object. Various stages of identification have been developed now by starting from Destructive Testing and Non-Destructive Testing. Along with the development of technology, Non-Destructive Testing method is often used to perform testing, because Non-Destructive Testing method is a test without damaging the object in direct contact. There are many design tools that support to the Non-Destructive Testing method, such as multicoil design that conducted in this research. Multicoil design will detect the test object and will be obtained some data in the form of electric motion (emf) to be analyzed average of the difference electric motion (emf). Then in each test using different coil configurations that can produce the largest emission of difference data on the test object to obtain the most feasible coil configuration and the best value distribution.

Keywords: Non-Destructive Testing, Feasible, Electric motion force (emf), multicoil, coil configuration