

ABSTRACT

Non-Destructive Testing (NDT) is a method that is often used in quality control processes in the industrial sector. NDT is also commonly used in the scanning process of an object to test the quality, physical condition and content of the object. Eddy Current Testing (ECT) is a magnetic method that is often used in NDT testing. In the scanning process, it is necessary to determine the position of the scanner, especially on the receiver coil, to help the system determine the test point in the scanning process. In this study, researchers took advantage of the performance of an infrared distance sensor that uses infrared light reflection as a distance measure and the sensor is attached to the x-axis and y-axis of the scanner to help determine the position of the receiver coil when scanning. Sensor testing is carried out on an object measuring 15 cm x 15 cm and using several measurement coordinate points on the test object. Based on the testing that has been carried out, the measurement results were obtained at 16 different coordinate points on the test object with the percentage error value of measurement on the x-axis, namely 1.22% - 5.77% and the y-axis namely 0.48% - 6.29%. In this measurement, a precision value of 97% - 99.90% was obtained. From the data that has been obtained, the results of the data in determining the position of the receiver coil are good and approaching the measured coordinate point value.

Keywords: Non-Destructive Testing, Eddy Current Testing, Infrared Distance Sensor, Receiver Coil, Position.