

## ABSTRACT

*To know the influence of Periodic Direct Current signal to voltage in receiver, required Periodic DC Voltage Source System that produce signal with certain pattern for inducted transmitter, certain pattern signal can be produce using microcontroler, microcontroller can set bit value with certain pattern, then system DAC convert bit value to voltage, so the form of signal will be same as pattern of bit value. The form of signals that system can produce are linear, LN, quadratic, and sine signals which has an amplitude range from 0V to 5V and have 10 working area in 100Hz – 2.1kHz. the result of waveform in receiver is AC although the waveform in transmitter is DC. The amplitude of signal increase when the sistem testing ferromagnetic material, Quadratic signal have the biggest percentage of voltage changes with 15.4% for Alumunium, 18.4% for copper , 5% for iron*

**Kata Kunci:** *Eddy Current Testing, System Voltage Source DC Periodic, the induction of the magnetic field.*