

Alat ukur distribusi medan magnet pada kumparan helmholtz = Measurement of magnetic field distribution in the Helmholtz Coil

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Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20290506&lokasi=lokal>

Abstrak

Telah dibuat suatu alat ukur distribusi 3-Dimensi medan magnet pada kumparan Helmholtz. Alat ukur ini menggunakan Hall probe sebagai sensor medan magnet. Sensor tersebut digerakkan oleh tiga motor dc melalui gerakan rotasi 3 buah batang berulir. Untuk memposisikan sensor di koordinat x, y, dan z dipasang shaft encoder pada masing-masing batang berulir. Alat ukur ini dikendalikan oleh microcontroller ATmega 8535 yang berfungsi juga sebagai pembaca data dari sensor dan counter. Hasil yang diperoleh sensor akan diolah dan ditampilkan di LabVIEW.

A system for 3-Dimension distribution of induction magnetic field measurement in Helmholtz coil had been made. Hall probe was used as a magnetic sensor. The sensor is driven by three dc motors through rotation 3 pieces of threaded rod. In order to put the sensor in the coordinates x, y, and z, each shaft encoder is mounted on each threaded rod. This system is controlled by using ATmega microcontroller IC 8535 which is used also as a data reader from sensors and counters. The results obtained by the sensors will be processed and displayed in LabVIEW.