DESIGN BUILD ESTIMATOR POWER ON THE ARCHIMEDEAN SCREW GENERATOR PROTOTYPE LABORATORY INSTRUMENTATION WORKSHOP

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Abstract
The rapid development of electronic technology make so many changes in the analog system. Some of the example electrical measurement tool, which using analog system is wattmeter. Wattmeter is measurement tool which using complex analog system for reading the value. To decrease difficulty of reading value, application of microcontroller ATMega 8535, LCD 16x2 and voltage dividing sensor is using to make an electric power gauge, or wattmeter. The generator test using multimeter in the 75cm of water level and average speed of generator 1321 rpm produce voltage 6,32 volt, current 0,64 ampere, and the power is 4,08 watt. From the LCD appear voltage average 6,79 volt, current 0,69 ampere, and the power 4,68 watt. Calculation of standart deviation result 0,87, value uncertainly UA1 is 0,21. In the 4.7 table is the data for calculation of uncertainly that close by regression UA2. And the result is 0,63. Increasing range of the power is 0 until 4,95 watt. Increasing span of the power is 4,95 watt.

Keywords: Electric power gauge, 16x2 LCD, microcontroller AT MEGA 8535.