DESIGN OF AN ATMEGA 8535 MICROCONTROLLER – BASED pH CONTROL SYSTEM FOR MIXING SOLUTION PROCESS

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ABSTRACT
An ATmega 8535 microcontroller – based pH controller was established. The system is able to process the input data taken from the pH electrode measurement of a solution with certain pH, to display the result on LCD (Liquid Crystal Display) and to control the on/off solenoid valve of lime (alkaline). The process starts from the initial pH value measurement using pH electrode. The value is then displayed on the LCD. The microcontroller ATmega 8535 monitors and controls the amount of bases should be added to obtain the desired pH (set point). Based on testing, the percentage of accuracy obtained for measurements of solution with pH 4, 7 and 9 is 99.95 %, 99.93 %, 99.96 %, respectively.

Keywords : pH control, LCD, Microcontroller ATmega 8535.