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ARM7 MICROCONTROLLER BASED FUZZY LOGIC CONTROLLER FOR LIQUID LEVEL CONTROL SYSTEM

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Abstract

Design and construction of a microcontroller based liquid level control system is presented in this paper. ARM7 (Philips LPC2129) microcontroller based system for the real time liquid level control is developed using the fuzzy logic controller (FLC). This controller has been applied to the water-in-tank level control of a continuous process. The controller is implemented in embedded C language to control the liquid level to the desired value. The performance of the proposed controller is compared with conventional PID controller. An accuracy of ±.1% is achieved in the control of liquid level over the range of 0 to 100cm. It is observed that the proposed scheme controls the tank level effectively not only in the steady state but also in the transient state.

Author Keywords

ARM7, FLC, Liquid Level, Microcontroller

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