Design and Build a Microcontroller-Based CH4, CO2 and H2S Gas Measurement System on Biogas

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ABSTRACT

Biogas is one of the renewable energies by utilizing animal manure. The problem experienced in biogas installation is the content of impurity gas which inhibits the complete combustion reaction in biogas. To monitor it, this research is used to manufacture a microcontroller-based measurement system for methane gas, carbon dioxide gas, and hydrogen sulfide gas. The results of the measurement system with the highest concentration value of CH4 gas is 41120.07 ppm, CO2 gas is 10403.97 ppm, and H2S gas is 10.59 ppm. These results can be influenced by the condition of the biogas installation when the sample is taken so that each biogas measurement has a different concentration.

Key Words : *Biogas, Gas Sensor,Microcotroller.*