

ABSTRACT

PROTOTYPE OF COCOA'S INDUSTRIAL WASTE MANAGEMENT WITH AUTOMATIC CONTROL BASE ON MICROCONTROLLER

Mostly the processing of large industrial waste does not comply with the regulations that apply to the local government. These unsuitable industrial wastes are disposed in the local population with regardless of the impact on the surrounding peoples. In the industrial waste result process, the liquid wastes that will be directly related to the people's environment. Some unsuitable wastes contain amount of mud. This mud could makes the clarity of liquid wastes and pH value with below average value that permitted. These problem could be reduced by automating treatment control of mud content, the liquids clarity, and pH value.

This treatment system will be consist by two different process. First the mud that contained in the waste will be control the turbidity with the method called floccuration and the result will be monitored by LDR sensor as a feedback. This method will separate the liquid and the mud. At the second process, the liquid that contains unsuitable pH would be treated by mixing acid and alkali. Furthermore the monitoring of the pH value would be using pH Meter Analog sensor. Systems would process it automaticly that will adjust when its ready to be disposed for environment.

The goal of this system design are the quality of liquid wastes would be more acceptable for envornment. That will be noticed by decreased the amount of mud at the liquid, increasing the liquid's clarity by the maximum value 20 NTU, and netralized the pH value with the target of pH contains between 6 to 8.

Keywords: Industrial liquid wastes, automatic control systems, floccuration.