Plagiarism Scan Report

Summary	
Report Genrated Date	20 Feb, 2018
Plagiarism Status	**100% Unique**
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The hydroponics method is a method o planting plants through air media that can live indoors or outdoors, hydroponic plants using NFT technique (Film Film Nutrition), where air and nutrients can be given through root plants. In a hydroponic system, ertilizer is used in air, which is then re erred to as hydroponic nutrition or nutrient solution. There are ive sensors used in hydroponic construction, eg PH, EC (Electrical Conductivity), air temperature, and air level. High-temperature sensor, ultrasonic sensor, ultrasonic sensor, ultrasonic sensor, ultrasonic sensor. The PH sensor used or. The PH sensor is used to measure the PH level in the air solution and the signal sender. PH Physical Control has become one o the most di ficult problems in the industrial control ield, due to its nonlinear nature in Indonesia o acid-alkali neutralization reaction and delays being processed such as PH modi ication, cultivation speed system using the hydroponics system with Nutrient Film Technique technique (NFT) There are two hydroponic modules are called greenhouses. The greenhouse used to be the inal node. Sensors will be placed in the ield o nutrition.
the PH process is carried out or low on a strong base and a weak acid. This process has three inputs and 2 outputs. an F is the acid low rate, C is the concentration o the acid solution, bF is the base low rate, b C is the concentration o the alkaline solution and V is the stable mixer tank reactor volume, F, bF and bu fer low rate is the process input and pH low which is expected to have a constant pH. Two o the three inputs, the acid and bu fer streams, are considered to have the constant low and the tank volume should be constant so we can control the pH value with the base low controlled and regulated by the valve. Controlling the PH value using the agitator in the container to uni ormly low the input. By de inition, pH values determine the activity o hydrogen ions in solution. PID controls are used in most industries because PID's have better reliability stability. The PID control algorithm can be expressed as ollows:

Fuzzy Logic is used to control the process o pH (Nonlinear process). uzzy is a theory that can not be true or alse but partly true In the PH process, the PH sensor is immersed in a solution or a liquid whose pH must be measured. The Output o the PH sensor is in terms o Voltage (0-100 mV). This voltage is calibrated in terms o PH. The voltage o the pH sensor is given as input to the uzzy controller. An appropriate membership unction is selected and the rule is ormed within it. Membership unctions are classi ied into values according to the process.

Previous research on PH with a value o 8 causes the plant dies. The purpose o this study

will be to control the PH at the value o 5.6-5.7 or better plant growth. combining 2 methods o Fuzzy Logic and PID method, PID is used to control PH at the value o 5.6 -5.7, but by using PID control the pump will continuously remove acidic or alkaline solution, in which case it takes Fuzzy Logic to give delay time or value The PH is stable then the pump will extract an acid or base solution to maintain the PH value.