ABSTRACT

This modern era, many people who love to keep ornamental fish because of its beauty and expensive price. However, nowadays people are preoccupied with affairs that require them to leave the house for a long time. Therefore, fish-keepers do not have the time to take care of their pets, such as draining the aquarium, feeding the fish periodically and knowing the availability of fish feed. Then it takes a system of maintenance and supervision of ornamental fish in an aquarium that can reduce the potential amount of fish stress and diseases commonly experienced by ornamental fish.

In this final task is the design of a system that can control the level of clarity of water and automatic feeding of fish. Feeding the fish automatically serves to feed the fish using the RTC, the servo motor will produce the amount of feed according to the time that has been set. If the fish feed is exhausted, the notification will appear buzzer. Turbidity Rate <25 NTU and Aquarium temperature 20ºC up to 28ºC. A water clarity monitoring system is seen from the comparison of a clarity parameter input from the set point and the turbidity meter sensor feedback that will be in the controller using the fuzzy logic method. The result of fuzzy logic processing, in the form of signal will activate the suction pump for further circulation process and water cleansing to the multilevel sieve. The process will repeat continuously until the clarity of water reaches the value of the set point. To maximize the functionality of the device, controllers are connected with several features. LCD feature to display all information of water clarity, temperature and feed time.

The aquarium control system runs according to the predefined context. The accuracy of the weight test of the feed is down from 5 grams – 50 grams between 96.40% to 97.85%. Test out feed notification or water clarity runs smoothly and its accuracy value is 100%. With Smart Aquarium, the process of feeding more scheduled and cleanliness of the aquarium awake

Keywords: fuzzy logic, water clarity

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