ABSTRACT

Brackish water shrimp has great potential to be used as a farm business in Indonesia. Now there are a lot of shrimp farms are easily found on the coast. To build and manage a pond are many factors to consider, and one of the factors that must be managed properly is the salinity of the water. Generally brackish water shrimp can grow well in the conditions of the water salinity ranges from 10-30 ppt (parts per thousand). With natural conditions and weather change - change, salinity in ponds usually increase or even decrease. In the dry season usually salinity of pond water has increased quite dramatically, while the rainy season is usually the salinity of the ponds that are in the normal range or even less than normal. In general, fish farmers carry out the addition of fresh water in the dry season and the addition of sea water in the rainy season to keep the salinity of the water remains stable.

In this thesis, the author will design a control *system* salinity or salt content in the shrimp ponds. The control *system* is done by measuring the levels of salt in the water pond using a conductivity sensor, data processing using fuzzy logic, direct control via computer and use akuator that pump fresh water and seawater to maintain the stability of salinity in the ponds.

Result of this thesis is the salinity in shrimp farms can be maintained, as well as facilitate the shrimp farmers in maintaining water quality. For the set point we use 17.5 PPT where the value is the midpoint of the value of good water quality for shrimp ponds.

Keywords : Salinity, Conductivity, Fuzzy