ABSTRACT

The problem of leakage in water distribution pipes is very much harm for various parties such as the demage of leakage PDAM's water distribution pipe. Currently, The officers need to check the state of the pipes in the water distribution area directly. In this final project, created a prototype system of water distribution pipe leak detection using Wireless Sensor Network technology which is efficient in terms of energy and cost and also implements M2M communication as a form of problem solving leakage of water distribution pipes. The prototype system uses a sensor waterflow, and the results can be monitored remotely using a monitor with a desktop application.

Based on the testing that has been done to meet the requirements of water leakage detection system, monitoring system of water distribution pipe network using Zigbee network / IEEE 802.15.4 and M2M platform can be used for the solution of water leakage on pipes. The sense of leakage could be seen by the increase value of flowrate by the sensor that located at the beginning of the pipeline and also followed by the reduction value of flowrate by the sensor that located at the following leakage point.

Keyword : leakage, water distribution, Wireless Sensor Networks, M2M