ABSTRACT

It is indicated that a river flow that is fed by water from the WWTP of industrial companies is experiencing pollution. So to find out whether there is leakage of waste into the river, testing is carried out. This study aims to design a monitoring system for the quality of wastewater output from the WWTP to analyze whether there is a leak or not. The water quality parameters used are pH, electrical conductivity and temperature. These three parameters have been able to be used as analytical materials to describe the general water quality being measured. The development of this system makes it easier for the community and the company to find out if there is leakage of waste into the river, so that they can take appropriate steps to handle it and prevent river pollution from an early stage. Previously, the system was tested in the laboratory and the system has succeeded in sending measurement data to the Antares web in real time and sending notifications to whatsapp when the measured parameter value exceeds the threshold. Furthermore, the system that has been tested in the laboratory is brought to the location of data collection. The results of monitoring that have been carried out for seven days the system works well and does not find any problems. Overall the performance of the WWTP is still running well, but based on the data obtained, the WWTP experienced a leak on the fifth day because the pH level exceeded the threshold of 11.64. The results of real-time measurements obtained an average pH of 7.59, EC 647.37 uS/cm and a temperature of 23.26°C.

***Keywords**: wastewater, WWTP, leakage, pH, EC, temperature*