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The Optimum Aeration Time of Wastewater Treatment by Surface Aerators in Suan Sunandha Rajabhat University

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Abstract : This research aimed to study on the efficiency of wastewater treatment by comparing the different aeration times of surface aerators in Suan Sunandha Rajabhat University. In doing so, the operation of surface aerators was divided into 2 groups which included the groups of 8 hours (8-0/opened-closed) and 4 hours (2-2/opened-closed) of aeration time per day. As a result of the study, it was found that the efficiency of wastewater treatment in the forms of DO, BOD, turbidity and NO2- by 8 hours (8-0/opened-closed) and 4 hours (2-2/opened-closed) of aeration time per day of surface aerators was not statistically different [Sig. = .644, .488, .716 and .054 > α (.05)] while the efficiency in the forms of NO3- and P was significantly different at the statistical level of .01 [Sig. = .001 and .000 < α (.01)].

Keywords : aeration time, surface aerator, wastewater treatment, efficiency
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