

عنوان مقاله:

Optimization of turbidity removal process from paperboard mill wastewater by Taguchi method

محل انتشار:

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نویسندگان:

Leila Talebpour - *M.Sc. student in Civil Engineering-Environmental Engineering, Babol Noshirvani University of Technology*

Daryoush Yousefi Kebria - *Assistant Professor in Environmental Engineering, Faculty of Civil Engineering, Babol Noshirvani University of Technology*

Hasan Amini Rad - *Assistant Professor in Environmental Engineering, Faculty of Civil Engineering, Babol Noshirvani University of Technology*

خلاصه مقاله:

Paperboard mills generate significant quantities of wastewater because of high water of usage during the manufacturing the paper pulp, that because of inappropriate system's operation, the generated wastewater including large amount of paper pulp in shape of turbidity. In this study, coagulation-flocculation process as physicochemical method was used for treatment of paperboard mill wastewater located in one of the industrial towns of Mazandaran. Efficiency of different factors (dose and type of coagulant, pH, dose and type of coagulant aid) on reduction of turbidity based on experiment design by Taguchi method was studied and optimum condition was determined. The purpose of this study was optimization of coagulation-flocculation process for access of maximum separation efficiency of pulp from water and reuse of water and separated pulp that carried out by Jar test and turbidity measurement. The results obtained showed that the highest removal efficiency of turbidity was 98% at optimum alum dosage of 2500 mg/l coupled with 20 mg/l of anionic polyacrylamid as coagulant aid at pH of 5.

کلمات کلیدی:

Paper pulp, Turbidity, Coagulation and flocculation, Jar test, Taguchi

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