

عنوان مقاله:

The Performance Improvement of Wastewater Treatment Plant of Paper Mill

محل انتشار:

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خلاصه مقاله:

Paper mill producing several type papers has a wastewater treatment plant with an aerated lagoon system to remove their pollutants. But the removal efficiency of this system is still low so that the effluent is still not complying with the Indonesian of effluent quality standards yet. It needs pre-treatment plant before aerated lagoon. In an effort to improve the performance of wastewater treatment plant, study of wastewater characteristics, wastewater treatment, the establishment of treatment systems and equipment design have been carried out. After construction of pre-treatment plant, the field trial of waste water treatment plant using wastewater come from several type of paper produced has also been done. Result of laboratory-scale experiment shows that the paper mill needs a wastewater treatment with physical-chemical system before aerated lagoon treatment. Field trial of wastewater treatment shows that the removal of suspended solids (TSS) of 97%, COD of 88%, BOD5 of 85%, and a pH of 6.2 to 7.7 could be obtained by using 5 - 10 % NaOH solution at doses of 50-240 mg/L and 0.1% cationic polyelectrolyte (PE) solution as flocculants at dose of 1.0 to 1.5 mg/L. The addition of physical-chemical treatment plant can lighten the load on an aerated lagoon treatment. Effluent quality of aerated lagoon discharged into environment has met the Indonesian of effluent quality standard.

کلمات کلیدی:

Aerated Lagoon, effluent quality standard, paper mill, physical-chemical treatment, Wastewater

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