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INFLUENCE OF OPERATIONAL PARAMETERS ON ELECTROCOAGULATION PROCESS IN PULP AND PAPER MILL EFFLUENT TREATMENT

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Abstract

In the present work an optimized experimental condition has been developed for the treatment of pulp and paper mill wastewater using an electrocoagulation process. The removal efficiency of 85 % COD and 94 % of color with a good repeatability of results (RSD <3%) has been achieved under the optimal experimental conditions of *pH*-7, treatment time of 2 h and a current density of 15 A/m^2. In this study, wastewater from paper mill has been used and thus, high efficacy of removing the pollutants makes this method potentially useful in the industrial condition. Furthermore, the structural and elemental characteristics of the sludge were studied by FE-SEM and EDS.

Key words: AOP, COD, color, electrocoagulation technique, pulp and paper mill wastewater

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