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Electrocoagulation followed by Settling and Filtration Process in Treatment of Domestic Sewage

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Abstract : The Domestic Sewage (DS) was treated using Electrocoagulation (EC) process. Effect of current and number of plates were taken as variable. Current = 2A and no. of plates = 6 was found to optimum with COD reduction of 62 mg/dm³ from initial COD 288 mg/dm³. During the treatment sludge was obtained which was separated from solution using filtration and sedimentation. The filtration cake resistance was found to 16.06×10^{12} , 21.98×10^{12} and 11.28×10^{12} m/kg at pH 7, 8 and 9 respectively. During the settling studies more than 70% settling was obtained in 5 minutes which shows significant separation of solid from mixture of solid and liquid. Design of settler has also been presented.

Keywords : Domestic Sewage, Electrocoagulation, Filtration, Sedimentation, COD.

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