

Industrial Wastewater Treatment Improvements Using Limestone

Authors : Mamdouh Y. Saleh, Gaber El Enany, Medhat H. Elzahar, Moustafa H. Omran

Abstract : The discharge limits of industrial wastewater effluents are subjected to regulations which are getting more restricted with time. A former research occurred in Port Said city studied the efficiency of treating industrial wastewater using the first stage (A-stage) of the multiple-stage plant (AB-system). From the results of this former research, the effluent treated wastewater has high rates of total dissolved solids (TDS) and chemical oxygen demand (COD). The purpose of this paper is to improve the treatment process in removing TDS and COD. So a pilot plant was constructed at wastewater pump station in the industrial area in the south of Port Said. Experimental work was divided into several groups adding powdered limestone with different dosages to wastewater, and for each group wastewater was filtered after being mixed with activated carbon. pH and TSS as variables were also studied. Significant removals of TDS and COD were observed in these experiments showing that using effective adsorbents can aid such removals to a large extent.

Keywords : adsorption, filtration, synthetic wastewater, TDS removal, COD removal

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