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Reduction of copper ions concentration in wastewaters of galvanoplastic industry by electroflotation

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Abstract

Industrial application of the use of bubbles to float fine particles in water began before the beginning of this century, in the field of mineral processing. Such bubble flotation was applied very little outside of mineral processing, until about 1960 when the dissolved air process, which had already had some success in the pulp and paper industry was applied to water and wastewater treatment. The subsequent two decades saw a growth development for water and wastewater treatment. Gas water for flotation can also be generated conveniently by electrolysis. This is electroflotation. This work consisted of studying the electroflotation process of solution containing copper ions which is a harmful metal. According to the results obtained, it has been noticed that these factors: concentration of eliminated ion, concentration of additives, density of current and pH of solution have a direct action on the processes of reduction of copper concentration. According to these results we have tried to treat a solution polluted by this metal with an efficiency elimination optimal of 90%.

Keywords: Electroflotation; Copper ions; Wastewater

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