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Studies of kinetic parameters of the process of solution purification from impurities of cobalt and nickel by metallic zinc

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Abstract

The values of kinetic solutions purification parameters from impurities of cobalt, nickel and hydrogen restoration by the metallic zinc have been obtained. The process of purification took place in water solutions without zinc sulfate and in its presence. The activating additives of copper and antimony were added into the solutions. It is shown that the obtained kinetic curves of the category of hydrogen cations are characteristic for topochemical reactions, and processes proceed on the interface of a solid and liquid phase. The experimental data allows to explain the reason for accelerated discharge of hydrogen cations in solutions containing zinc sulphate and increased consumption, while zinc metal (zinc dust) in industrial purification of zinc sulfate solutions from impurities.