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Kinetics of the joint recovery of nickel and hydrogen in the diffusion mode

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Abstract

On the basis of polarization measurements to determine the kinetic parameters of the discharge of nickel ions and hydrogen. Discharge of hydrogen has no significant effect on the kinetics of recovery of nickel ions, but affects the diffusion parameters of the near-electrode space due to the mixing of gas bubbles. Given the current efficiency and the real surface area of the electrode evaluated currents partial recovery of nickel and hydrogen under conditions of high diffusion limitations for delivery of metal ions to the interface dendritic crystallization and precipitation. It has been shown that the apparent heterogeneous rate constant discharge hydrogen at the joint with the recovery of nickel ions is substantially less than in the background solution.