Optimization of conditions for electrochemical refining rough indium from chloride electrolytes

Abstract. The studies found that the discharge-ionization of indium chloride electrolytes at a platinum electrode have a stepwise character. Analysis of the cyclic voltammetric curves indicates the irreversibility of occurring electrode reactions. Chronoamperometry methods using X-ray diffraction analysis of the electrode surface found the optimal conditions for deposition of indium in chloride electrolytes. Study of the influence of salt concentration of indium in the electrolyte and temperature on the discharge ionization processes indium allowed to establish acceptable values for these parameters.

Keywords: indium, polarization, refining, potential, discharge-ionization