

ABSTRACT

Improvement of the process of electroextraction of copper from acidic nitrate-containing solutions with their subsequent regeneration.

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Master's dissertation, 2020. Number of pages – 91, tables– 23, pictures – 13, literature – 33.

The process of electroextraction of copper from acidic nitrate-containing solutions was improved. A sealed cell with an electrolyte flow has been developed.

In the course of the work, copper was obtained by electroextraction of an acidic nitrate-containing solution using a sealed cell with an electrolyte flow. As a result, a copper precipitate with a purity of 99.9 WT%.

The technology provides for electroextraction of copper, treatment of harmful gases generated during electroextraction, and treatment of wastewater with a low copper content. Automation of the cell is provided by installing a temperature, level, and flow sensor. A startup project has been developed, and the data obtained indicate the profitability of such an enterprise. The laboratory provides for labor protection measures.

Keywords: copper electroextraction, nitrate-containing solutions, sealed cell, chlorine, catchers, technical and economic indicators, automation scheme.