



The application of electrodialysis to the treatment of industrial copper and zinc electrolytes

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ABSTRACT

The zinc electrolyte obtained from a zinc smelting process and the copper electrolyte from an electrorefining process were treated with application of the electrodialysis. Three anion exchange membrane types ACM, PC Acid 60 and PC Acid 100 combined with the cation exchange membrane CMS were tested. Up to 99% Zn, Mg and Mn retention factors were obtained. The majority of chloride ions are being transferred from the diluate to the concentrate stream. Up to 25% of the arsenic can be removed from the copper electrolyte feed solution.

Keywords: Electrodialysis; Membrane; Sulphuric acid; Copper; Zinc; Separation

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