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CONTRIBUTIONS TO ELECTROCHEMICAL OXIDATION OF CN⁻ ION STUDY

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Abstract

Taking into account the practical importance of the electrochemical oxidation of the CN⁻ ion from wastewaters, a systematically study was preformed, regarding the influences of the anode nature, current density, temperature and Cu²⁺ concentration on the rate of the overall electrolytic process. The cell optimal parameters were found to be: nickel anode, the anode-cathode interval of 2 cm, current density 0,65 A/dm², concentration range (10⁻²-10⁻⁵) mol CN⁻/L, initial molar ratio c₀(CN⁻)/c₀(Cu²⁺) = 5/1 and temperature, under 50⁰C. In these conditions, the specific consumption of energy is of (5-10) KWh/KgCN⁻.

Keywords: cyanide, electrochemical oxidation, anode , current density, temperature, Cu²⁺, catalyst

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