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Simultaneous Production of Electrolytic Metallic Manganese and Electrolytic Manganese Dioxide in an AMI 7001S Anion Exchange Membrane Electrochemical Reactor

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Abstract

The effect of manganese and ammonium sulfate concentrations, temperature, selenium composite additives and cathode current density on the current efficiency of metallic manganese was studied. This was done for the simultaneous production of compact electrolytic manganese dioxide at the anode in a laboratory electrochemical reactor by anion exchange membrane using AMI 7001S (Membrane International Inc., USA). The experimental results obtained from the large scale

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laboratory electrochemical reactor are discussed. A version of this technology that could be used for the simultaneous production of metallic manganese and electrolytic manganese dioxide is also discussed.

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