

Title (en)

METHOD FOR THE ELECTROCHEMICAL OXIDATION OF SULPHURIC ACID CHROMIUM III SOLUTIONS INTO CHROMIUM VI SOLUTIONS

Publication

EP 0245279 B1 19890712 (DE)

Application

EP 86901730 A 19860227

Priority

AT 57785 A 19850227

Abstract (en)

[origin: WO8605215A1] The treatment of nitric acid-containing sulphuric acid chromium III solutions, as they are produced during the oxidizing purification of combustion gases, presents great difficulties or is very costly. The aim of the invention is to provide a method wherein the current expenses for the electrolysis are low. The method, according to the invention, for the electrochemical oxidation of sulphuric acid chromium III solutions into chromium VI lies essentially in that the nitric acid, the sulphuric acid and the chromium are contained in the electrolyte, the nitric acid being used as redox carrier for the oxygen electrode acting as cathode and the nitric acid being regenerated by the oxygen. Carbon or graphite are used as cathode material. For the anode, electrodes are used which present a higher oxygen overvoltage such as for example lead dioxide. The cell voltages which may be obtained in these conditions are comprised between 0.9 and 2 volts. This means that the current expenses for the electrolysis are reduced by 1/3 approximately.

IPC 1-7

C25B 1/00

IPC 8 full level

C25B 1/00 (2006.01)

CPC (source: EP US)

C25B 1/00 (2013.01 - EP US)

Designated contracting state (EPC)

BE CH DE FR GB IT LI LU NL SE

DOCDB simple family (publication)

WO 8605215 A1 19860912; AT 382894 B 19870427; AT A57785 A 19860915; AU 5580786 A 19860924; BG 80794 A 19931224; DD 243300 A5 19870225; DE 3664341 D1 19890817; EP 0245279 A1 19871119; EP 0245279 B1 19890712; FI 80075 B 19891229; FI 80075 C 19900410; FI 873678 A0 19870825; FI 873678 A 19870825; HU 201361 B 19901028; HU T46081 A 19880928; JP S62501979 A 19870806; US 4859294 A 19890822

DOCDB simple family (application)

AT 8600016 W 19860227; AT 57785 A 19850227; AU 5580786 A 19860227; BG 8079487 A 19870730; DD 28736586 A 19860226; DE 3664341 T 19860227; EP 86901730 A 19860227; FI 873678 A 19870825; HU 302386 A 19860227; JP 50154686 A 19860227; US 8567787 A 19870724