

Title (en)

Apparatus and process for electrolysis using a cation-permselective membrane and turbulence inducing means.

Title (de)

Einrichtung und Verfahren zur Elektrolyse unter Verwendung einer halbdurchlässigen kationischen Membrane und Turbulenz erzeugende Hilfsmittel.

Title (fr)

Procédé et appareillage pour électrolyse utilisant une membrane cationique semi-perméable avec des moyens pour provoquer la turbulence.

Publication

EP 0002009 A1 19790530 (DE)

Application

EP 78101296 A 19781103

Priority

US 85034477 A 19771110

Abstract (en)

High current efficiency can be obtained in an electrolytic cell by inducing turbulence in the catholyte preferably by utilizing a gas-directing cathode (10) and cationpermselective membrane (24) combination. There is disclosed a process for electrolysis, particularly, the electrolysis of an alkali metal chloride such as sodium chloride to produce chlorine and sodium hydroxide. Said cell has a cathode and an anode (23) divided into catholyte and anolyte compartments by a cation-permselective membrane. Turbulence inducing means such as a gas-directing cathode provides turbulence in said catholyte at the surface of said membrane by directing gas evolving on said cathode toward or away from said membrane. Multicell arrangements are also disclosed wherein said cells are connected in series.

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C25B 1/46; C25B 11/03

IPC 8 full level

C25B 1/46 (2006.01)

CPC (source: EP US)

C25B 1/46 (2013.01 - EP US)

Citation (search report)

- FR 2263034 A1 19751003 - ASAHI CHEMICAL IND [JP]
- [A] FR 2070757 A1 19710917 - NIPPON SODA CO
- CHEMICAL ABSTRACTS, vol. 88, 1978, page 329, ref. 67260v, Columbus, Ohio, (USA) NISHIMURA: "Cathode design for diaphragm cell used in brine electrolysis"; & JP-A-52 114 571 (TOKUYAMA SODA KK.) published 26-09-1977

Cited by

DE3219704A1; IT202100006248A1; EP0039171B1; EP3537603A1

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BE DE

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