Title (en)

Method of generating halogen, an electrode-membrane assembly, an electrolytic cell and a semipermeable ion-exchange membrane for said method.

Title (de)

Verfahren zum Erzeugen von Halogen, Elektrodenmembrananordnung, elektrolytische Zelle und semipermeable Ionenaustauschermembran für genanntes Verfahren.

Title (fr)

Procédé pour la production d'halogène, ensemble électrode-membrane, cellule d'électrolyse et membrane échangeuse d'ions semiperméable pour ledit procédé.

Publication

EP 0050188 A1 19820428 (EN)

Application

EP 81105076 A 19810630

Priority

IT 2548280 A 19801021

Abstract (en)

Aqueous alkali metal hydroxide is electrolyzed to generate elemental halogen in a cell having a sandblasted membrane (105) or other rough or abraded surfaced ion exchange membrane (105) with the rough surface exposed to electrolyte, While the surface may be on either the anodic or cathodic side lower voltage is attained when it is on the cathodic side, This is especially true when the cathode has an open structure and is in direct contact with the rough surface but unbonded thereto whereby liquid electrolyte is in ready contact both with the electrode and the membrane (105). The electrode is gas and electrolyte permeable and may be in the form of an electroconductive screen (108a, 114) or several electroconductive screens (108a, 114) in face to face contact. These screens (108a, 114) or opposed surtaces thereof may have different hydrogen or halogen overvoltages, Often in such a case the film or screen surface having the higher overvoltage is in contact with the rough membrane (105) surface and the surface or screen having the lower overvoltage is spaced from the membrane (105) with the higher overvoltage surface interposed between the membrane (105) and the lower overvoltage surface. The low overvoltage surface of course is in direct electrical contact with the higher overvoltage surface. Generally the surface having the low overvoltage is greater in area than the surface having the high overvoltage.

IPC 1-7

C25B 13/02; C25B 1/46; C25B 11/02

IPC 8 full level

C25B 9/23 (2021.01); **C25B 13/00** (2006.01); **C25B 13/08** (2006.01)

CPC (source: EP)

C25B 9/23 (2021.01); **C25B 13/00** (2013.01)

Citation (search report)

[X] GB 2043108 A 19801001 - ASAHI CHEMICAL IND

Cited by

EP1919598A4; US5252193A; JP2015188844A; EP2434033A1; CN102418112A; EP3854914A4

Designated contracting state (EPC)

AT BE CH DE FR GB IT LI NL SE

DOCDB simple family (publication)

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DOCDB simple family (application)

EP 81105076 A 19810630; AU 7664281 A 19811020; ES 505908 A 19810930; ES 514591 A 19820730; IT 2548280 A 19801021; JP 8241081 A 19810529; NO 812184 A 19810625; ZA 813742 A 19810604