

Title (en)

Electrolysis cell and method of generating halogen.

Title (de)

Elektrolysezelle und Verfahren zur Herstellung von Halogenen.

Title (fr)

Cellule d'électrolyse et méthode de production d'halogène.

Publication

EP 0124125 A2 19841107 (EN)

Application

EP 84104849 A 19840430

Priority

US 49051583 A 19830502

Abstract (en)

Halogen is produced by electrolyzing an aqueous halide in a specially designed cell. The cell comprises an analyte chamber and a catholyte chamber separated by a permeable membrane or diaphragm, notably an ion exchange (generally cation exchange) polymer. At least one electrode comprises at least two sections. One section comprises a gas and electrolyte permeable layer, sheet or mat having a catalytic surface, i.e. one having a low overvoltage, (low hydrogen overvoltage if the cathode and low halogen overvoltage if the anode). This layer is spaced from the membrane by a second portion comprising an electroconductive resiliently compressible layer or mat, which is in contact with the membrane on one side thereof, the other side thereof being in contact with the main cathode. This second or spacer section advantageously has an electrode surface having a higher overvoltage than the first electrode surface. Preferably the cathode has the above construction. Upon electrolysis of alkali metal chloride or other halide in such a cell and with a cathode of the type described above, a low voltage is obtained even at high current densities and the cathode efficiency is high.

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C25B 9/00; **C25B 1/46**

IPC 8 full level

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CPC (source: EP)

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EP 0124125 A2 19841107; **EP 0124125 A3 19850515**; **EP 0124125 B1 19880713**; AT E35700 T1 19880715; DE 3472686 D1 19880818; JP H0670276 B2 19940907; JP S59208087 A 19841126

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