

Title (en)

Chlor-alkali electrolytic process in membrane cells using non-purified salt

Title (de)

Chloralkalielektrolyse-Verfahren in Membranzellen unter Elektrolyse von ungereinigtem Siedesalz

Title (fr)

Procédé d'électrolyse chlore-alkali dans des cellules à membrane utilisant un sel non-purifié

Publication

EP 1167579 B1 20060927 (DE)

Application

EP 01114430 A 20010615

Priority

DE 10031018 A 20000624

Abstract (en)

[origin: EP1167579A1] Chlor-alkali electrolysis comprises using an electrolysis cell having an anode chamber with an anode separated from a cathode chamber with a cathode by a membrane. Water is fed to the side of the cathode chamber and a saturated sodium chloride (NaCl) solution is fed to the side of the anode chamber. A mixture of aqueous sodium hydroxide and hydrogen gas is produced by electrolysis on the cathode side, and chlorine gas is produced on the anode side forming a lean sol. The membrane is in the acid state. The mixture of aqueous sodium hydroxide and hydrogen gas is removed on the cathode outlet of the electrolysis cell and the chlorine gas and oxygen are removed on the anode side of the cell. An Independent claim is also included for an apparatus for carrying out the process. Preferred Features: The chlorine gas removed on the anode side is free from lean sol. The aqueous sodium hydroxide has a concentration of less than 20, preferably 2-5 wt.% NaOH. The membrane is a cation exchange membrane, preferably made of a polymer derivative with sulfonyl groups. The polymer is a polymer based on perfluorinated hydrocarbons. The aqueous sodium hydroxide and the chlorine are used in the production of a chlorine bleaching solution. The anode is coated with mixed oxides based on iridium oxide and tantalum oxide.

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