

(19) World Intellectual Property Organization

International Bureau



(43) International publication date

1 May 2003 (01.05.2003)

(10) International publication number

PCT

WO 03/035935 A2

(51) International patent classification⁷:

C25B

(72) Inventors; and

(21) International application number:

PCT/EP02/11404

(75) Inventors/Applicants (US only): BULAN, Andreas [DE/DE]; Alt Langenfeld 15, 40764 Langenfeld (DE). GESTERMANN, Fritz [DE/DE]; Berliner Str. 83, 51377 Leverkusen (DE). PINTER, Hans-Dieter [DE/DE]; Forstring 20, 42929 Wermelskirchen (DE). KLESPER, Walter [DE/DE]; Kalmüntener Str. 103, 51467 Bergisch Gladbach (DE).

(22) International filing date: 11 October 2002 (11.10.2002)

(25) Language of filing:

German

(26) Language of publication:

German

(30) Data relating to the priority:

101 52 276.2 23 October 2001 (23.10.2001) DE

(74) Joint Representative: BAYER AKTIENGESELLSCHAFT; 51368 Leverkusen (DE).

(71) Applicant (for all designated States except US): BAYER AKTIENGESELLSCHAFT [DE/DE]; 51368 Leverkusen (DE).

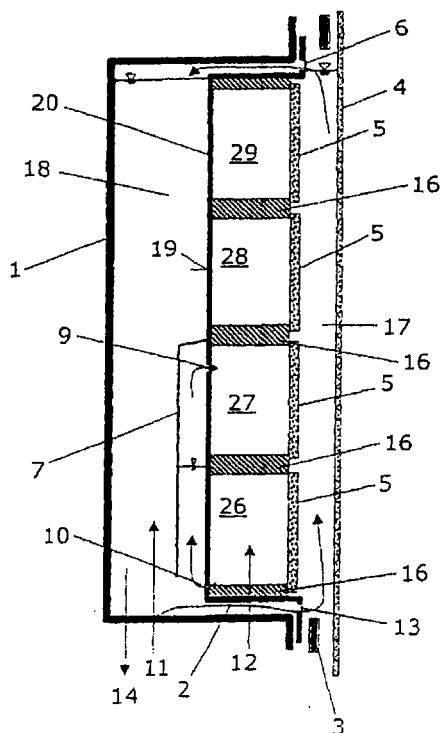
(81) Designated states (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB,

[continued on next page]

As printed

(54) Title: ELECTROCHEMICAL HALF-CELL

(54) Bezeichnung: ELEKTROCHEMISCHES HALBELEMENT



(57) Abstract: The invention concerns an electrochemical half-cell for preparing chlorine from aqueous alkali chloride solutions, comprising an electrode chamber (17) designed to contain an electrolyte. Said half-cell also comprises several gas pockets (26, 27, 28, 29) which are separated from the electrode chamber (17) by a gas-diffusing electrode (5). The invention is characterized in that said half-cell includes a support element (21), for supporting the gas pockets (26, 27, 28, 29), which is adjacent over its entire surface to the rear wall (20) of the pockets (26, 27, 28, 29) or which constitutes the rear wall (20) of said gas pockets (26, 27, 28, 29).

(57) Zusammenfassung: Eine elektrochemische Halbzelle zur Herstellung von Chlor aus wässrigen Lösungen von Alkalichlorid weist einen Elektrodenraum (17) zur Aufnahme eines Elektrolyten auf. Ferner sind mehrere Gastaschen (26, 27, 28, 29) vorgesehen, wobei die Gastaschen (26, 27, 28, 29) von dem Elektrodenraum (17) durch eine Gasdiffusionselektrode (5) getrennt sind. Erfindungsgemäss weist die Halbzelle ein Trägerelement (21) zum Tragen der Gastaschen (26, 27, 28, 29) auf, welches an der Rückwand (20) der Gastaschen (26, 27, 28, 29) vollflächig anliegt oder die Rückwand (20) der Gastaschen (26, 27, 28, 29) ausbildet.

WO 03/035935 A2



162162



G00002

GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated states (regional): ARIPO Patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian Patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European Patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR), OAPI Patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN,*

IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO Patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian Patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European Patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR), OAPI Patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

Published:

- *without international search report and to be republished upon receipt of that report*

For an explanation of the two-letter codes and the other abbreviations, reference is made to the explanations ("Guidance Notes on Codes and Abbreviations") at the beginning of each regular edition of the PCT Gazette.