

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
16 February 2006 (16.02.2006)

PCT

(10) International Publication Number
WO 2006/017234 A3

(51) International Patent Classification:

C01B 11/06 (2006.01) **B01F 3/08** (2006.01)
B01F 3/04 (2006.01)

(21) International Application Number:

PCT/US2005/024563

(22) International Filing Date: 12 July 2005 (12.07.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/587,102 12 July 2004 (12.07.2004) US
11/178,580 11 July 2005 (11.07.2005) US

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

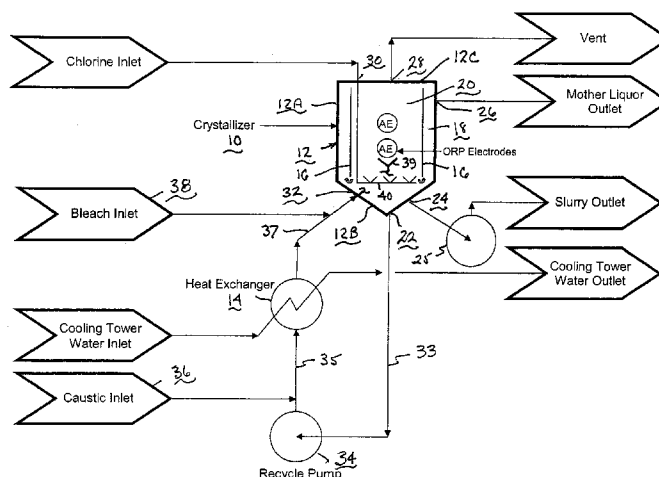
Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

[Continued on next page]

(54) Title: MANUFACTURE OF HIGH-STRENGTH, LOW-SALT HYPOCHLORITE BLEACH

LOW SALT BLEACH PROCESS DIAGRAM



(57) Abstract: A process and apparatus for the manufacture of high-strength, low-salt hypochlorite, especially sodium hypochlorite. An aqueous solution that comprises certain weight percentages of sodium hypochlorite and sodium hydroxide and that is essentially free of sodium chloride (salt) crystals (38), an aqueous solution that comprises a certain percentage of sodium hydroxide (36), and chlorine in gas and/or liquid phase (30) that may or may not include inerts are reacted in a tank (10). This creates a solution having a precipitation zone (20) where salt crystals are precipitating out of solution and falling downward to form a slurry, some of which is withdrawn (33), then cooled, and then re-introduced into the precipitation zone. Above the precipitation zone is a crystal-free mother liquor zone consisting essentially of crystal-free mother liquor (26) containing a weight percentage of sodium hypochlorite greater than that of the lower strength aqueous sodium hypochlorite bleach being reacted.

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(88) Date of publication of the international search report:

6 July 2006

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.