

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
6 January 2011 (06.01.2011)

PCT

(10) International Publication Number  
**WO 2011/002952 A3**

(51) International Patent Classification:

*C01F 7/02* (2006.01)      *C01F 7/46* (2006.01)  
*C01F 7/34* (2006.01)      *C01B 13/36* (2006.01)

(21) International Application Number:

PCT/US2010/040697

(22) International Filing Date:

1 July 2010 (01.07.2010)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

12/495,914      1 July 2009 (01.07.2009)      US

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO,

DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))
- of inventorship (Rule 4.17(iv))

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

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

28 April 2011

(54) Title: A COMPOSITION AND METHOD FOR ENHANCING THE PRODUCTION OF CRYSTAL AGGLOMERATES FROM A PRECIPITATION LIQUOR



(57) Abstract: The present invention relates ways to increase the output of a high quality product from the precipitation liquor crystallization process exemplified through the aluminum hydroxide recovery processes such as the Bayer process. The invention is a method of increasing the size of precipitated of a liquor. The invention in one embodiment relates to the use of a crystal growth modifier compositions added to the precipitation process to increase the particle size distribution of the precipitated alumina trihydrate.



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## INTERNATIONAL SEARCH REPORT

International application No.  
**PCT/US2010/040697**

<b>A. CLASSIFICATION OF SUBJECT MATTER</b>		
<i>C01F 7/02(2006.01)i, C01F 7/34(2006.01)i, C01F 7/46(2006.01)i, C01B 13/36(2006.01)i</i>		
According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b>		
Minimum documentation searched (classification system followed by classification symbols) C01F 7/02; C01F 7/00; C02F 1/52		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Korean utility models and applications for utility models Japanese utility models and applications for utility models		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) eKOMPASS(KIPO internal) & Keywords: aluminum hydroxide production, crystal growth modifier, surfactant, oil, water		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	WO 2008-076783 A2 ( NALCO COMPANY et al. ) 26 June 2008 See abstract; page 4, line 25-page 10, line 9.	1,3,4,6,11-14 2,5,7-10
A	US 4737352 A1 ( OWEN; DAVID O. et al. ) 12 April 1988 See abstract; column 2, line 25-column 3, line 54.	1-14
A	US 2006-0273040 A1 ( MURAT QUADIR et al. ) 07 December 2006 See abstract; paragraphs 0040-0092.	1-14
A	US 2004-0131539 A1 ( DETLEF KUBOTH et al. ) 08 July 2004 See abstract; paragraph 0011-0040.	1-14
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
Date of the actual completion of the international search 21 FEBRUARY 2011 (21.02.2011)		Date of mailing of the international search report <b>22 FEBRUARY 2011 (22.02.2011)</b>
Name and mailing address of the ISA/KR  Korean Intellectual Property Office Government Complex-Daejeon, 139 Seonsa-ro, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140		Authorized officer LEE, Jin Hong Telephone No. 82-42-481-8649 

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International application No.

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