

Title (en)

IMPROVED PROCESS FOR THE EXTRACTION OF ALUMINA FROM BAUXITE

Title (de)

VERBESSERTES VERFAHREN ZUR EXTRAKTION VON ALUMINIUMOXID AUS BAUXIT

Title (fr)

PROCEDE AMELIORE CONCERNANT L'EXTRACTION D'ALUMINE A PARTIR DE LA BAUXITE

Publication

EP 0777628 A4 19990609 (EN)

Application

EP 95928901 A 19950823

Priority

- AU 9500526 W 19950823
- AU PM761194 A 19940823

Abstract (en)

[origin: WO9606043A1] A process for the extraction of alumina from bauxite having a relatively high boehmite content including the steps of digestion of the gibbsite fraction of the bauxite over a period of about 2 to 2.5 minutes at a temperature of about 135 DEG to 145 DEG C and at an A/C ratio of about 0.76, to achieve negligible boehmite reversion, substantially complete kaolinite dissolution and substantially no precipitation of DSP, subjecting the liquid fraction from the gibbsite digestion stage to post-desilication in the presence of hydroxysodalite seed to reduce the silica concentration close to the solubility of hydroxysodalite, subjecting the liquid fraction to secondary desilication using tricalcium aluminate produced externally by the addition of lime to spent liquor to minimise alumina losses from the pregnant liquor and to reduce the silica content in the spent liquor to reduce scaling, subjecting the residue from the gibbsite digestion to an additional digestion step to digest the boehmite, said digestion of the boehmite fraction being formed at lower temperature and/or lower residence time than is normally the case.

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C01F 7/06

IPC 8 full level

C01F 7/062 (2022.01); **C01F 7/47** (2022.01)

CPC (source: EP)

C01F 7/062 (2013.01); **C01F 7/47** (2013.01)

Citation (search report)

- [DY] WO 9402416 A1 19940203 - COMALCO ALU [AU], et al
- [DXY] US 4518571 A 19850521 - KALUZHSKY NIKOLAI A [SU], et al
- [Y] DATABASE WPI Section Ch Derwent World Patents Index; Class E33, AN 71-53735S, XP002081110
- [A] CHEMICAL ABSTRACTS, vol. 101, no. 24, 10 December 1984, Columbus, Ohio, US; abstract no. 213412, SHMIGIDIN, YU. I. ET AL: "Decomposition of high-modulus aluminate solutions from the pilot-plant treatment of nepheline rocks of the Sea of Azov region" XP002081109 & KHIM. TEKHNOL. (KIEV) (1984), (2), 18-20 CODEN: KHMTA6;ISSN: 0368-556X
- See references of WO 9606043A1

Designated contracting state (EPC)

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DOCDB simple family (publication)

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