

Title (en)

IMPROVEMENT TO THE BAYER PROCESS FOR THE PRODUCTION OF ALUMINA TRIHYDRATE BY MEANS OF ALKALINE LEACHING OF BAUXITE, SAID METHOD COMPRISING A PREDESILICIFICATION STEP

Title (de)

VERBESSERTES BAYER-VERFAHREN ZUR HERSTELLUNG VON ALUMINIUMTRIHYDRAT MITTELS ALKALISCHER LAUGUNG VON BAUXIT SOWIE VORENTKIESELUNGSSCHRITT FÜR DIESES VERFAHREN

Title (fr)

PERFECTIONNEMENT AU PROCEDE BAYER DE PRODUCTION DE TRIHYDRATE D'ALUMINE PAR ATTAQUE ALCALINE DE BAUXITE, LEDIT PROCEDE COMPORTANT UNE ETAPE DE PREDESSILICATATION

Publication

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Application

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Abstract (en)

[origin: WO2005123591A1] The invention relates to the Bayer process which comprises the grinding (L, B) and the subsequent leaching (N2, A) of a bauxite by bringing same into contact with a sodium aluminate liquor (20b, 120b). The aforementioned leaching results in the formation of a suspension (3a, 103) which is treated in order to separate the insoluble residues (5a, 105a) from the sodium aluminate liquor. Next, the liquor is decomposed (D) and, subsequently, recycled as a leach liquor (20, 120) after being (i) separated from the alumina trihydrate (11, 111) precipitated during the decomposition step and (ii) concentrated by means of evaporation (E). The inventive method comprises a predesilicification treatment (P) during which the ground bauxite, prior to leaching, is brought into contact with an aqueous sodium solution. The invention is characterised in that the predesilicification treatment comprises the use of an aqueous sodium solution (30, 130) having a concentration of carbonates, sulphates and, optionally, chlorides, which is expressed as a percentage in relation to the caustic soda concentration and which is less than half of the concentration of the corresponding impurities of the decomposed liquor (8, 108).

IPC 8 full level

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CPC (source: EP US)

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