

Title (en)

PROCESS FOR TREATING A SOLID CARBONACEOUS MATERIAL CONTAINING ALUMINUM, FLUORIDES AND SODIUM IONS

Title (de)

VERFAHREN ZUR BEHANDLUNG EINES FESTEN KOHLENSTOFFHALTIGEN MATERIALS, ENTHALTEND ALUMINIUM, FLUORIDE UND NATRIUMIONEN

Title (fr)

PROCÉDÉ DE TRAITEMENT D'UNE MATIÈRE CARBONÉE SOLIDE CONTENANT DE L'ALUMINIUM, DES FLUORURES ET DES IONS SODIUM

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Application

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Abstract (en)

[origin: WO2017221173A1] The present invention relates to a process for treating a solid carbonaceous material containing aluminum, fluorides and Na⁺ ions, comprising the following steps: (a) leaching said solid carbonaceous material with at least one aqueous alkaline solution to form: (i) an extraction solution comprising said aluminum in hydrosoluble form, said fluorides and said Na⁺ ions, and (ii) at least one solid insoluble residue; (b) separating said insoluble solid residue from said extraction solution; (c) subjecting said extraction solution free from said solid insoluble residue to a membrane electrolysis process to form at least one precipitate comprising said aluminum and at least one aqueous solution of NaOH. The above process is particularly suitable for the treatment of spent potlinings (SPLs) deriving from electrolytic reduction cells of alumina for the recovery of aluminum, fluorides, and sodium ions contained therein.

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