

Title (en)

METHOD AND APPARATUS TO CREATE UNIFORM MIXING IN CONNECTION WITH A HYDROMETALLURGICAL PROCESS

Title (de)

VERFAHREN UND VORRICHTUNG ZUR HERSTELLUNG GLEICHFÖRMIGER MISCHUNGEN IN VERBINDUNG MIT EINEM HYDROMETALLURGIEVERFAHREN

Title (fr)

PROCÉDÉ ET APPAREIL DESTINÉS À CRÉER UN MÉLANGE UNIFORME EN RELATION AVEC UN PROCÉDÉ HYDROMÉTALLURGIQUE

Publication

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Application

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Priority

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Abstract (en)

[origin: WO2011070218A1] A method and equipment for separating solids from slurry containing a suspension of liquid and fine solid particles. An amount of liquid flocculant is added to the slurry that is considerably smaller than the amount of slurry. The slurry and flocculant are mixed with a mixer (1) to bring about contact between the fine solid particles and the flocculant in order to bind the fine solid particles to each other as flocs. The solids and liquid of the flocculated slurry are separated from each other with a separation device (2) in a separate process stage after the flocculation stage. The flocculant is gently mixed into the slurry with a helical rotor mixer (1) at a low mixing intensity, giving the mixture in the cylindrical tank of the mixer a vertical macrocirculation flow and simultaneously creating in it smaller turbulent microflows without essentially subjecting the mixture to shear forces in order to avoid breaking up the flocs. The method and equipment are extremely practical in the treatment of the fine tailings generated in oil sands refining.

IPC 8 full level

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CPC (source: EP FI US)

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Citation (search report)

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