

Title (en)

PROCESS FOR RECOVERING AND RECYCLING COMPOUNDS CONTAINED IN EFFLUENTS OF THE DELIGNIFICATION AND BLEACHING IN PULP MILLS

Title (de)

VERFAHREN ZUR WIEDERGEWINNUNG UND -VERWENDUNG VON ABFALLSTOFFEN AUS DER DELIGNIFIZIERUNG UND BLEICHE IN ZELLSTOFFFABRIKEN

Title (fr)

PROCEDE DE RECUPERATION ET DE RECYCLAGE DE COMPOSES CONTENUS DANS DES EFFLUENTS PROVENANT DE PROCEDES DE DELIGNIFICATION ET DE BLANCHIMENT DANS DES USINES DE PATE A PAPIER

Publication

EP 1456135 A2 20040915 (EN)

Application

EP 02785913 A 20021011

Priority

- IT 0200652 W 20021011
- IT MI20012119 A 20011012

Abstract (en)

[origin: WO03031348A2] The process consists in : a) causing the black liquor resulting from a delignification process to undergo one or more anaerobic treatments in order to produce biogas from the organic substance to be used as an energy source and to convert, by such methanation, the sodium salts of the organic acids into Na₂CO₃, b) evaporating the liquor resulting from the anaerobic treatment in order to recover water condensate and concentrate the liquor, c) causing the concentrated black liquor to undergo an oxidation treatment in order to destroy the organic compounds with CO₂ production and recover chemicals, heat and water, d) recovering the alkaline sodium salts by means of different solubility, e) causing the separated alkalis to undergo a decarbonation in order to transform them in carbonates ; and f) recausticing part of carbonates in sodium hydroxide, a reactant contained in the liquor of the delignification.

IPC 1-7

C02F 3/00

IPC 8 full level

C02F 1/02 (2006.01); **C02F 1/04** (2006.01); **C02F 1/60** (2006.01); **C02F 1/74** (2006.01); **C02F 3/28** (2006.01); **C02F 9/00** (2006.01); **C02F 9/14** (2006.01); **D21C 11/00** (2006.01); **D21C 11/14** (2006.01); **C02F 1/72** (2006.01)

CPC (source: EP)

C02F 1/048 (2013.01); **C02F 9/00** (2013.01); **C12M 21/04** (2013.01); **C12M 43/08** (2013.01); **C12M 47/10** (2013.01); **D21C 11/00** (2013.01); **D21C 11/14** (2013.01); **C02F 1/025** (2013.01); **C02F 1/72** (2013.01); **C02F 3/286** (2013.01); **C02F 2103/28** (2013.01); **Y02E 50/30** (2013.01); **Y02P 20/59** (2015.11); **Y02P 70/10** (2015.11)

Citation (search report)

See references of WO 03031348A2

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LU MC NL PT SE SK TR

DOCDB simple family (publication)

WO 03031348 A2 20030417; WO 03031348 A3 20031002; EA 200400532 A1 20050630; EP 1456135 A2 20040915; IT MI20012119 A1 20030412; JP 2005504899 A 20050217

DOCDB simple family (application)

IT 0200652 W 20021011; EA 200400532 A 20021011; EP 02785913 A 20021011; IT MI20012119 A 20011012; JP 2003534338 A 20021011