

Title (en)
LIGNOCELLULOSE PROCESSING

Title (de)
LIGNOZELLULOSEVERARBEITUNG

Title (fr)
TRAITEMENT DE LA LIGNOCELLULOSE

Publication
EP 2694723 A1 20140212 (EN)

Application
EP 12716644 A 20120329

Priority

- IE 20110161 A 20110401
- IE 2012000014 W 20120329

Abstract (en)
[origin: WO2012131665A1] A method of transforming a lignocellulose material comprises the steps of: a. combining a lignocellulose material with a solution containing hydrogen peroxide and a hydrogen peroxide stabiliser to produce a mixture that is at least 3% by mass hydrogen peroxide, b. feeding said mixture to the entrance of a continuous reactor concomitant with providing an agent that facilitates the rapid decomposition of the hydrogen peroxide in the solution proximal to the entrance of the reactor so as to cause exothermic, explosive decomposition of the hydrogen peroxide to oxygen and water thus forming a mixture of gas, liquid, and solids and increasing the pressure and temperature in the reactor to at least 15 bar, and 70°C respectively without addition of heat from an external source, c. exiting the mixture of gas, water and solids formed in the reactor through an outlet with a pressure change, into a flash vessel wherein the mixture is separated into a liquid phase containing dissolved or suspended solids and a gas phase substantially rich in oxygen, and d. continuously removing from the flash vessel a gas stream substantially rich in oxygen and a separate heated liquid stream having suspended or dissolved therein chemically and physically altered components of the lignocellulose including a substantially cellulosic material with reduced recalcitrance relative to the starting lignocellulose material.

IPC 8 full level
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CPC (source: EP)
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Citation (search report)
See references of WO 2012131665A1

Cited by
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