

Title (en)

METHOD FOR PREHYDROLYSIS OF LIGNOCELLULOSIC MATERIAL

Title (de)

VERFAHREN ZUR VORHYDROLYSE VON LIGNOCELLULOSEMATERIAL

Title (fr)

PROCÉDÉ DE PRÉ-HYDROLYSE DE MATÉRIAUX LIGNOCELLULOSIQUES

Publication

**EP 3901367 A1 20211027 (EN)**

Application

**EP 20397506 A 20200420**

Priority

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Abstract (en)

According to an example aspect of the present invention, there is provided a method for hydrolysing lignocellulosic chip material in a reaction vessel by a hydrolysis reaction carried out in the presence of steam at a reaction temperature. The method comprises the steps of heating the lignocellulosic material to the reaction temperature by feeding a medium pressure steam flow into the reaction vessel, introducing during a preselected period of time a liquid SO<sub>2</sub> flow into the medium pressure steam flow and vaporizing the liquid SO<sub>2</sub> flow to form gaseous SO<sub>2</sub> in the medium pressure steam flow, continuing the feed of the medium pressure flow into the reaction vessel after said preselected period of time, and maintaining the reaction temperature for hydrolysing the lignocellulosic material.

IPC 8 full level

**D21C 1/02** (2006.01)

CPC (source: EP)

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Citation (applicant)

- US 3132051 A 19640505 - LUCIANO NOBILE, et al
- US 5139617 A 19920818 - TIKKA PANU O [FI], et al
- FI 121237 B 20100831 - DANISCO [DK]
- RADIOTIS ET AL., NWBC, vol. 1, 2011, pages 325 - 365

Citation (search report)

- [Y] WO 2017100907 A1 20170622 - IOGEN CORP [CA]
- [Y] GB 734216 A 19550727 - PROCEL SA
- [Y] US 2065396 A 19361222 - RICHTER GEORGE A
- [A] US 2012064592 A1 20120315 - O'MULLAN PATRICK [US], et al
- [A] US 2011192560 A1 20110811 - HEIKKILA HEIKKI [FI], et al
- [Y] SCHELL D J ET AL: "A technical and economic analysis of acid-catalyzed steam explosion and dilute sulfuric acid pretreatments using wheat straw or aspen wood chips", APPLIED BIOCHEMISTRY AND BIOTECHNOLOGY ; PART A: ENZYME ENGINEERING AND BIOTECHNOLOGY, HUMANA PRESS INC, NEW YORK, vol. 28 - 29, no. 1, 1 March 1991 (1991-03-01), pages 87 - 97, XP035177040, ISSN: 1559-0291, DOI: 10.1007/BF02922591

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