Title (en)

APPARATUS OF CATALYTIC GASIFICATION FOR REFINED BIOMASS FUEL AT LOW TEMPERATURE AND THE METHOD THEREOF

Title (de)

VORRICHTUNG ZUR KATALYTISCHEN VERGASUNG VON RAFFINIERTEM BIOMASSENBRENNSTOFF BEI NIEDRIGER TEMPERATUR UND VERFAHREN DAFÜR

Title (fr)

APPAREIL DE GAZEIFICATION CATALYTIQUE POUR UN COMBUSTIBLE A BIOMASSE RAFFINE A FAIBLE TEMPERATURE, ET SON PROCEDE D'UTILISATION

Publication

EP 1773968 A4 20120328 (EN)

Application

EP 05750463 A 20050614

Priority

- KR 2005001808 W 20050614
- KR 20040061657 A 20040805

Abstract (en)

[origin: WO2006031011A1] Disclosed is a gasification technique for converting biomass, which is difficult to treat, into clean gas fuel able to be burned in a cogeneration system. The gasification technique includes first stage fluidized-bed catalytic gasification, and second stage gasification of tar and catalytic reforming to convert nitrogen in tar, and HCN in a flammable gas into NH3, unlike conventional gasification techniques. In addition, since the temperature of a total gasification process is lower than a melting point of ash, powdery ash is generated and thus easily treated. Also, little heat is released due to the low process temperature, and therefore, a compact reactor may be designed to produce gas having a high caloric value. Further, the generated tar is recovered and reused in other processes, and the gas fuel contains a small amount of ammonia.

IPC 8 full level

C10J 3/54 (2006.01); **C10J 3/56** (2006.01)

CPC (source: EP KR US)

C10G 1/00 (2013.01 - KR); **C10J 3/482** (2013.01 - EP US); **C10J 3/54** (2013.01 - EP US); **C10J 3/56** (2013.01 - EP US); **C10J 3/84** (2013.01 - EP US); **C10K 1/024** (2013.01 - EP US); **C10K 1/026** (2013.01 - EP US); **C10K 1/046** (2013.01 - EP US); **C10K 1/08** (2013.01 - EP US); **C10K 1/18** (2013.01 - EP US); **C10K 1/20** (2013.01 - EP US); **C10K 3/02** (2013.01 - EP US); **C10K 3/023** (2013.01 - EP US); B01J 23/02 (2013.01 - EP US); B01J 23/34 (2013.01 - EP US); B01J 23/745 (2013.01 - EP US); B01J 23/75 (2013.01 - EP US); B01J 23/78 (2013.01 - EP US); B01J 37/04 (2013.01 - EP US); C01B 2203/0272 (2013.01 - EP US); C10J 2200/158 (2013.01 - EP US); C10J 2300/0916 (2013.01 - EP US); C10J 2300/093 (2013.01 - EP US); C10J 2300/0946 (2013.01 - EP US); C10J 2300/0956 (2013.01 - EP US); C10J 2300/0973 (2013.01 - EP US); C10J 2300/0983 (2013.01 - EP US); C10J 2300/0989 (2013.01 - EP US); C10J 2300/1693 (2013.01 - EP US); C10J 2300/1846 (2013.01 - EP US); C10J 2300/1869 (2013.01 - EP US); C10J 2300/1884 (2013.01 - EP US); C10J 2300/1892 (2013.01 - EP US); Y02P 20/52 (2015.11 - EP US)

Citation (search report)

- [I] US 3115394 A 19631224 - EVERETT GORIN, et al
- [I] EP 1142981 A2 20011010 - FRAUNHOFER GES FORSCHUNG [DE]
- [I] US 4865625 A 19890912 - MUDGE LYLE K [US], et al
- [I] US 3929431 A 19751230 - KOH KWANG K, et al
- [A] US 2003099594 A1 20030529 - LYON RICHARD K [US]
- See references of WO 2006031011A1

Designated contracting state (EPC)

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

DOCDB simple family (publication)

WO 2006031011 A1 20060323; EP 1773968 A1 20070418; EP 1773968 A4 20120328; JP 2007506856 A 20070322; JP 4243295 B2 20090325; KR 100569120 B1 20060410; KR 20060012934 A 20060209; US 2007094929 A1 20070503

DOCDB simple family (application)

KR 2005001808 W 20050614; EP 05750463 A 20050614; JP 2006535283 A 20050614; KR 20040061657 A 20040805; US 56099205 A 20050614