

Title (en)
GASIFICATION REACTOR AND METHOD FOR ENTRAINED-FLOW GASIFICATION

Title (de)
VERGASUNGSREAKTOR UND VERFAHREN ZUR FLUGSTROMVERGASUNG

Title (fr)
RÉACTEUR DE GAZÉIFICATION ET PROCÉDÉ DE GAZÉIFICATION À LIT ENTRAÎNÉ

Publication
EP 2190954 A1 20100602 (DE)

Application
EP 08802361 A 20080918

Priority
• EP 2008007841 W 20080918
• DE 102007044726 A 20070918
• DE 102008012734 A 20080305

Abstract (en)
[origin: WO2009036985A1] The invention relates to a method and a device for obtaining synthesis gas by the gasification of liquid or finely comminuted, solid fuels at a pressure of 0.3 to 8 Mpa at a temperature in the range of 1200 to 2000 °C with oxygen-containing, gaseous gasification agents in a cooled reactor (3), wherein liquid slag is deposited on the walls thereof. The reactor is located in a first pressure container. The obtained synthesis gas is generated in a first reaction chamber (2), arranged at the top of the reactor. In the upper region thereof, the substances to be used are fed. Liquid slag is deposited on the side walls thereof and can run off freely without the surface of the slag solidifying. At the bottom side thereof, an opening (6) with a dripping edge (7) is located, from where the obtained synthesis gas can be withdrawn toward the bottom and the liquid slag running down can drain. A second chamber (8) connects to the opening at the bottom, the synthesis gas being kept dry and being cooled in said second chamber (8). A water film that is produced by suitable devices and that falls freely delimits the second chamber. A third chamber (15) connects to the second chamber at the bottom and in it cooling takes place by adding water to the synthesis gas. A water bath (21) connects to the bottom of the third chamber, the drained and already solidified or still liquid slag particles dropping into said water bath. At the bottom or on the side of the third chamber (15), but above the water bath (21), the generated and cooled synthesis gas is withdrawn from the pressure container (4).

IPC 8 full level
C10J 3/48 (2006.01); **C10J 3/52** (2006.01); **C10J 3/84** (2006.01)

CPC (source: EP US)
C01B 3/02 (2013.01 - US); **C10J 3/20** (2013.01 - US); **C10J 3/485** (2013.01 - EP US); **C10J 3/78** (2013.01 - EP US); **C10J 3/82** (2013.01 - US); **C10J 3/845** (2013.01 - EP US); **C10J 2200/09** (2013.01 - EP US); **C10J 2300/0916** (2013.01 - EP US); **C10J 2300/093** (2013.01 - EP US); **C10J 2300/0943** (2013.01 - EP US); **C10J 2300/1223** (2013.01 - EP US); **Y02P 20/145** (2015.11 - EP US)

Citation (search report)
See references of WO 2009036985A1

Cited by
US9890341B2

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)
AL BA MK RS

DOCDB simple family (publication)
WO 2009036985 A1 20090326; AU 2008300900 A1 20090326; AU 2008300900 B2 20130321; BR PI0816866 A2 20150317; CA 2699714 A1 20090326; CA 2699714 C 20160419; CN 101842467 A 20100922; CN 101842467 B 20130925; EP 2190954 A1 20100602; HK 1144443 A1 20110218; KR 101568433 B1 20151111; KR 20100063722 A 20100611; MX 2010002998 A 20100401; MX 342740 B 20161010; NZ 584044 A 20120629; RU 2010115329 A 20111027; RU 2495912 C2 20131020; TW 200925262 A 20090616; TW I467001 B 20150101; US 2010263278 A1 20101021; US 2016160138 A1 20160609; US 9290709 B2 20160322; US 9890341 B2 20180213; ZA 201001851 B 20111130

DOCDB simple family (application)
EP 2008007841 W 20080918; AU 2008300900 A 20080918; BR PI0816866 A 20080918; CA 2699714 A 20080918; CN 200880113959 A 20080918; EP 08802361 A 20080918; HK 10110937 A 20101125; KR 20107005964 A 20080918; MX 2010002998 A 20080918; NZ 58404408 A 20080918; RU 2010115329 A 20080918; TW 97135767 A 20080918; US 201615044651 A 20160216; US 73372008 A 20080918; ZA 201001851 A 20100316