

Title (en)

FLUIDIZED BED REACTOR WITH BACK-MIXING FOR DEHYDROGENATION OF LIGHT PARAFFINS

Title (de)

FLUIDIZED BED REACTOR WITH BACK-MIXING FOR DEHYDROGENATION OF LIGHT PARAFFINS

Title (fr)

RÉACTEUR À LIT FLUIDISÉ AVEC MÉLANGE À CONTRE-COURANT POUR LA DÉSHYDROGÉNATION DE PARAFFINES LÉGÈRES

Publication

EP 2097163 A4 20120523 (EN)

Application

EP 07869106 A 20071211

Priority

- US 2007087065 W 20071211
- US 88234906 P 20061228

Abstract (en)

[origin: WO2008082866A1] An improved process and system for the endothermic dehydrogenation of an alkane stream (1) is described. The process and system of the present invention comprise a back-mixed fluidized bed reactor (4). The alkane stream is dehydrogenated in a single reactor stage by contacting the alkane stream with a back-mixed fluidized bed (44) of catalyst. Deactivated catalyst (38) is withdrawn from the back-mixed fluidized reactor and heated to produce hot regenerated catalyst (36). The hot regenerated catalyst is returned to the back-mixed fluidized bed reactor at a rate sufficient to maintain the back-mixed fluidized bed reactor at substantially isothermal conditions.

IPC 8 full level

B01J 8/18 (2006.01); **C07C 5/32** (2006.01)

CPC (source: EP KR)

B01J 8/18 (2013.01 - KR); **B01J 21/04** (2013.01 - KR); **C07C 5/32** (2013.01 - KR); **C07C 5/324** (2013.01 - EP); **C07C 5/325** (2013.01 - EP); **C07C 2521/04** (2013.01 - EP); **C07C 2521/08** (2013.01 - EP); **C07C 2521/16** (2013.01 - EP); **C07C 2523/26** (2013.01 - EP); **C07C 2523/28** (2013.01 - EP); **C07C 2523/30** (2013.01 - EP); **C07C 2523/36** (2013.01 - EP); **C07C 2523/42** (2013.01 - EP); **C07C 2523/44** (2013.01 - EP); **C07C 2523/745** (2013.01 - EP); **C07C 2523/75** (2013.01 - EP); **C07C 2523/755** (2013.01 - EP); **Y02P 20/584** (2015.11 - EP)

C-Set (source: EP)

1. **C07C 5/324 + C07C 11/02**
2. **C07C 5/325 + C07C 11/02**

Citation (search report)

- [XII] WO 2005077867 A2 20050825 - DOW GLOBAL TECHNOLOGIES INC [US], et al
- [XII] US 2820072 A 19580114 - WOOD DONALD W, et al

Citation (examination)

- US 2004092391 A1 20040513 - ROKICKI ANDRZEJ [US], et al
- OCTAVE LEVENSPIEL ET AL.: "backmixing in the design of chemical reactors", INDUSTRIAL AND ENGINEERING CHEMISTRY, vol. 51, no. 12, 1 December 1959 (1959-12-01), pages 1431 - 1434
- See also references of WO 2008082866A1

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 LV MC MT NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

WO 2008082866 A1 20080710; CN 101568379 A 20091028; CN 101568379 B 20130213; EP 2097163 A1 20090909; EP 2097163 A4 20120523; KR 101489768 B1 20150204; KR 20090103905 A 20091001; MY 145854 A 20120430

DOCDB simple family (application)

US 2007087065 W 20071211; CN 200780048334 A 20071211; EP 07869106 A 20071211; KR 20097013586 A 20071211; MY PI20092488 A 20071211