

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 Deactivated catalyst (38) is withdrawn from the back-mixed fluidized reactor and heated to produce hot regenerated catalyst (36).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

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DOCDB simple family (application)

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