

Title (en)

HYBRID REACTOR HEAVY PRODUCT UPGRADING METHOD WITH DISPERSED CATALYST UPTAKE

Title (de)

VERFAHREN ZUR AUFWERTUNG VON SCHWEREN PRODUKTEN IN EINEM HYBRIDREAKTOR MIT DISPERGIERTER KATALYSATORAUFNAHME

Title (fr)

PROCEDE DE VALORISATION DE PRODUITS LOURDS EN REACTEUR HYBRIDE AVEC CAPTATION D'UN CATALYSEUR DISPERSE

Publication

**EP 3394214 A1 20181031 (FR)**

Application

**EP 16809327 A 20161202**

Priority

- FR 1562948 A 20151221
- EP 2016079647 W 20161202

Abstract (en)

[origin: CA3007325A1] The invention thus relates to a method for hydrotreating a heavy petroleum load in at least one reactor containing a fixed-bed catalyst, in which method a solution containing a dispersed catalyst or a dispersed catalyst precursor is continuously introduced into said reactor, the particle size of said dispersed catalyst being between 1 nm and 100 µm. Specifically, the invention relates to in situ catalyst formation for a method for hydrotreatment on the basis of a fixed-bed catalyst that picks up a dispersed catalyst on the solid support thereof.

IPC 8 full level

**C10G 49/00** (2006.01); **B01J 23/28** (2006.01); **B01J 35/02** (2006.01); **B01J 35/10** (2006.01); **C10G 45/08** (2006.01); **C10G 45/12** (2006.01); **C10G 45/14** (2006.01); **C10G 49/04** (2006.01); **C10G 49/06** (2006.01); **C10G 49/08** (2006.01); **C10G 49/12** (2006.01)

CPC (source: EP KR US)

**B01J 23/28** (2013.01 - EP KR US); **B01J 23/30** (2013.01 - EP KR US); **B01J 23/882** (2013.01 - EP KR US); **B01J 23/883** (2013.01 - EP KR US); **B01J 23/888** (2013.01 - EP US); **B01J 23/885** (2013.01 - KR); **B01J 35/40** (2024.01 - EP KR US); **B01J 35/613** (2024.01 - EP KR US); **B01J 35/615** (2024.01 - EP US); **B01J 35/617** (2024.01 - EP US); **B01J 35/618** (2024.01 - EP US); **B01J 35/63** (2024.01 - KR); **B01J 35/651** (2024.01 - EP US); **B01J 35/653** (2024.01 - EP US); **B01J 35/657** (2024.01 - EP KR US); **B01J 37/0209** (2013.01 - EP US); **B01J 37/04** (2013.01 - EP US); **C10G 45/04** (2013.01 - EP US); **C10G 45/08** (2013.01 - EP US); **C10G 45/12** (2013.01 - EP US); **C10G 45/14** (2013.01 - EP KR US); **C10G 49/002** (2013.01 - EP KR US); **C10G 2300/107** (2013.01 - EP US); **C10G 2300/202** (2013.01 - EP US); **C10G 2300/205** (2013.01 - EP US)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**FR 3045650 A1 20170623; FR 3045650 B1 20190412;** BR 112018012087 A2 20181127; CA 3007325 A1 20170629; CN 108603127 A 20180928; EP 3394214 A1 20181031; KR 20180096750 A 20180829; MX 2018007491 A 20180801; RU 2018126307 A 20200123; US 2018355262 A1 20181213; WO 2017108377 A1 20170629

DOCDB simple family (application)

**FR 1562948 A 20151221;** BR 112018012087 A 20161202; CA 3007325 A 20161202; CN 201680074175 A 20161202; EP 16809327 A 20161202; EP 2016079647 W 20161202; KR 20187020883 A 20161202; MX 2018007491 A 20161202; RU 2018126307 A 20161202; US 201616064799 A 20161202