

Title (en)

INCREASING OCTANE NUMBER OF LIGHT NAPHTHA USING A GERMANIUM-ZEOLITE CATALYST

Title (de)

ERHÖHUNG DER OKTANZAHL VON LEICHTNAPHTHA MITHILFE EINES GERMANIUM-ZEOLIT-KATALYSATORS

Title (fr)

AUGMENTATION DE L'INDICE D'OCTANE D'UN NAPHTHA LÉGER À L'AIDE D'UN CATALYSEUR DE TYPE ZÉOLITHE CONTENANT DU GERMANIUM

Publication

EP 2507195 A4 20141126 (EN)

Application

EP 10835119 A 20101202

Priority

- US 59288309 A 20091204
- US 2010058723 W 20101202

Abstract (en)

[origin: US2011132804A1] This invention relates to a process for the increasing the octane number of a naphtha hydrocarbon feed having a predominantly paraffin content with a germanium-containing zeolite catalyst. The catalyst is a non-acidic germanium zeolite on which a noble metal, such as platinum, has been deposited. The zeolite structure may be of MTW, MWW, MEL, TON, MRE, FER, MFI, BEA, MOR, LTL or MTT. The zeolite is made non-acidic by being base-exchanged with an alkali metal or alkaline earth metal, such as cesium, potassium, sodium, rubidium, barium, calcium, magnesium and mixtures thereof, to reduce acidity. The catalyst is sulfur tolerant. The hydrocarbon feed may contain sulfur up to 1000 ppm. The present invention could be applicable to a feedstream which is predominantly naphthenes and paraffins.

IPC 8 full level

B01J 29/04 (2006.01); **B01J 29/44** (2006.01); **C07C 5/13** (2006.01); **C10G 35/06** (2006.01); **C10G 35/085** (2006.01)

CPC (source: EP KR US)

B01J 20/18 (2013.01 - KR); **B01J 23/44** (2013.01 - KR); **B01J 29/047** (2013.01 - EP US); **B01J 29/44** (2013.01 - EP US); **C07C 5/13** (2013.01 - KR); **C07C 5/41** (2013.01 - KR); **C10G 35/065** (2013.01 - EP US); **C10G 35/085** (2013.01 - EP US); **B01J 2229/20** (2013.01 - EP US); **C10G 2300/1044** (2013.01 - EP US); **C10G 2300/1081** (2013.01 - EP US); **C10G 2300/1096** (2013.01 - EP US); **C10G 2300/202** (2013.01 - EP US); **C10G 2300/305** (2013.01 - EP US); **C10G 2300/4018** (2013.01 - EP US)

Citation (search report)

- [XY] US 2008255398 A1 20081016 - STEVENSON SCOTT A [US], et al
- [XY] US 5114565 A 19920519 - ZONES STACEY I [US], et al
- [Y] US 4645586 A 19870224 - BUSS WALDEEN C [US]
- See references of WO 2011068964A1

Cited by

CN109382115A

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

DOCDB simple family (publication)

US 2011132804 A1 20110609; CN 102639472 A 20120815; EP 2507195 A1 20121010; EP 2507195 A4 20141126; IN 3131DEN2012 A 20150918; JP 2013512317 A 20130411; KR 20120088829 A 20120808; SG 181153 A1 20120730; WO 2011068964 A1 20110609

DOCDB simple family (application)

US 59288309 A 20091204; CN 201080054410 A 20101202; EP 10835119 A 20101202; IN 3131DEN2012 A 20120411; JP 2012541234 A 20101202; KR 20127014437 A 20101202; SG 2012040028 A 20101202; US 2010058723 W 20101202