

Title (en)

TWO-STAGE HYDROCRACKING INTEGRATED PROCESS AND HYDROPROCESSING PROCESS

Title (de)

INTEGRIERTES HYDROCRACKING-VERFAHREN IN ZWEI STUFEN, UND HYDROTREATING-VERFAHREN

Title (fr)

PROCEDE INTEGRE D'HYDROCRAQUAGE DEUX ETAPES ET D'UN PROCEDE D'HYDROTRAITEMENT

Publication

EP 3415588 B1 20200513 (FR)

Application

EP 18305724 A 20180613

Priority

FR 1755489 A 20170616

Abstract (en)

[origin: US2018362864A1] A process for hydrocracking hydrocarbon-containing VD feedstocks allowing the improved production of middle distillates: a) hydrocracking of feedstocks in hydrogen and at least one hydrocracking catalyst, b) gas/liquid separation of effluent originating from a) producing a liquid effluent and a gaseous effluent with hydrogen, c) comprising the gaseous effluent before recycling into hydrocracking a), d) fractionation of liquid effluent into at least one effluent of converted hydrocarbon-containing products having boiling points less than 340° C. and an unconverted liquid fraction having a boiling point greater than 340° C., e) hydrocracking unconverted liquid fraction from d), in hydrogen and a hydrocracking catalyst, f) hydrotreating effluent from e) in a mixture with a hydrocarbon-containing gas-oil liquid feedstock having at least 95% by weight of compounds boiling at a boiling point between 150 and 400° C., hydrotreating f) operating in hydrogen and with at least one hydrotreating catalyst.

IPC 8 full level

C10G 65/12 (2006.01); **C10G 45/02** (2006.01); **C10G 47/00** (2006.01); **C10G 67/02** (2006.01)

CPC (source: BR CN EP KR US)

C10G 45/02 (2013.01 - EP US); **C10G 47/00** (2013.01 - BR EP US); **C10G 47/36** (2013.01 - BR); **C10G 49/00** (2013.01 - BR);
C10G 49/26 (2013.01 - BR); **C10G 65/12** (2013.01 - EP KR US); **C10G 67/00** (2013.01 - CN); **C10G 67/02** (2013.01 - EP US);
C10G 47/02 (2013.01 - KR); **C10G 2300/1011** (2013.01 - KR); **C10G 2300/1037** (2013.01 - KR); **C10G 2300/1059** (2013.01 - EP US);
C10G 2300/107 (2013.01 - KR); **C10G 2300/1074** (2013.01 - EP KR US); **C10G 2300/1077** (2013.01 - KR); **C10G 2300/4006** (2013.01 - KR);
C10G 2300/4012 (2013.01 - KR); **C10G 2300/4081** (2013.01 - EP US)

Cited by

FR3104606A1; FR3101082A1; WO2021058289A1; FR3091537A1; FR3091533A1; FR3091535A1; FR3091534A1; FR3091536A1;
CN114402056A; US11767479B2; US10982157B2; WO2020144097A1; WO2020144095A1

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)

EP 3415588 A1 20181219; **EP 3415588 B1 20200513**; BR 102018011832 A2 20190115; BR 102018011832 B1 20221025;
CA 3008093 A1 20181216; CN 109135825 A 20190104; CN 109135825 B 20211231; DK 3415588 T3 20200810; FR 3067717 A1 20181221;
FR 3067717 B1 20201113; KR 102558074 B1 20230720; KR 20180137410 A 20181227; TW 201906993 A 20190216; TW I800512 B 20230501;
US 10752848 B2 20200825; US 2018362864 A1 20181220

DOCDB simple family (application)

EP 18305724 A 20180613; BR 102018011832 A 20180612; CA 3008093 A 20180612; CN 201810619500 A 20180615;
DK 18305724 T 20180613; FR 1755489 A 20170616; KR 20180066862 A 20180611; TW 107120443 A 20180614; US 201816006300 A 20180612