

Title (en)

Hydrotreating process.

Title (de)

Wasserstoffbehandlungsverfahren.

Title (fr)

Procédé d'hydrotraitement.

Publication

EP 0611816 A1 19940824

Application

EP 94200372 A 19940211

Priority

EP 93200432 A 19930215

Abstract (en)

Process for hydrotreating a hydrocarbon oil employing several reactor vessels, which process comprises: (i) further hydrotreating partly hydrotreated hydrocarbon oil (8) of step (iv) in a first reactor vessel (1) in the presence of clean hydrogen containing gas (1), (ii) separating (3) the mixture obtained in step (i) within the first reactor vessel into a hydrotreated hydrocarbon oil (4) and used hydrogen containing gas (3), which hydrotreated hydrocarbon oil can be recovered as product, (iii) hydrotreating fresh hydrocarbon oil (5) in the second reactor (2) vessel in the presence of used hydrogen containing gas (3) obtained in step (ii), (iv) separating the effluent of step (iii) into partly hydrotreated hydrocarbon oil (8) and contaminated hydrogen containing gas (7), and (v) transporting partly hydrotreated hydrocarbon oil obtained in step (iv) to step (i).

IPC 1-7

C10G 65/04; C10G 65/08

IPC 8 full level

C10G 45/04 (2006.01); **C10G 45/06** (2006.01); **C10G 45/10** (2006.01); **C10G 45/12** (2006.01); **C10G 45/48** (2006.01); **C10G 45/52** (2006.01);
C10G 65/04 (2006.01); **C10G 65/08** (2006.01)

CPC (source: EP)

C10G 65/04 (2013.01); **C10G 65/08** (2013.01)

Citation (search report)

- [X] FR 2184684 A1 19731228 - UNIVERSAL OIL PROD CO [US]
- [X] GB 960440 A 19640610 - EXXON RESEARCH ENGINEERING CO
- [X] BE 571792 A
- [A] US 3915841 A 19751028 - MURPHY JR HARRY C, et al

Cited by

US5968347A; EP1056818A4; US6444865B1; WO2011006952A2; US7381321B2; WO2013098336A1; WO0174973A1; WO0042130A1;
JP4969754B2

Designated contracting state (EPC)

BE DE DK ES FR GB IT NL SE

DOCDB simple family (publication)

EP 0611816 A1 19940824; CA 2115518 A1 19940816; JP H06299168 A 19941025; SG 47086 A1 19980320

DOCDB simple family (application)

EP 94200372 A 19940211; CA 2115518 A 19940211; JP 3636394 A 19940210; SG 1996005928 A 19940211