

Title (en)

A METHOD FOR THE HYDROGENATION TREATMENT OF HEAVY OILS

Publication

EP 0131912 B1 19881005 (EN)

Application

EP 84108167 A 19840712

Priority

JP 12978983 A 19830716

Abstract (en)

[origin: EP0131912A1] The invention provides an efficient process for the catalytic hydrogenation reforming of a heavy oil, in which the slurry of a feed heavy oil and catalyst particles is introduced into a reaction vessel (4) and ascends in the vessel as being carried by the hydrogen-containing gas introduced into the vessel at the bottom gas inlet port (3). When the slurry reached the upper part of the vessel, the slurry is freed from the gaseous material and then descends in the vessel through a gravity-difference separation zone (9) formed in contact with the inner walls of the vessel, in which the descending velocity of the slurry is so low that the catalyst particles gravitationally settle in the slurry and are separated from the liquid portion and the liquid portion thus freed from the catalyst particles is discharged through the liquid discharge port (2) provided at the side wall of the vessel at such a space velocity as not to disturb free settling of the catalyst particles in the separation zone. The slurry containing the thus increased amount of the catalyst particles descends to the bottom of the vessel and is again carried up by the gas through the upflow zone formed in the central portion of the vessel.

IPC 1-7

C10G 49/10; C10G 47/24

IPC 8 full level

C10G 49/16 (2006.01)

CPC (source: EP)

C10G 49/16 (2013.01)

Cited by

WO2010033480A3

Designated contracting state (EPC)

BE DE FR GB IT NL

DOCDB simple family (publication)

EP 0131912 A1 19850123; EP 0131912 B1 19881005; CA 1248485 A 19890110; DE 3474458 D1 19881110; JP H0572439 B2 19931012; JP S6023483 A 19850206

DOCDB simple family (application)

EP 84108167 A 19840712; CA 457765 A 19840628; DE 3474458 T 19840712; JP 12978983 A 19830716