

Title (en)

MULTI-STAGE REFORMING PROCESS USING RHENIUM-CONTAINING CATALYST IN THE FINAL STAGE

Title (de)

VIELSTUFIGES REFORMIERVERFAHREN UNTER VERWENDUNG EINES RHENIUM ENTHALTENDEN KATALYSATORS IN DER ENDSTUFE

Title (fr)

PROCEDE DE REFORMAGE MULTIPHASE UTILISANT UN CATALYSEUR CONTENANT DU RHENIUM DANS LA PHASE FINALE

Publication

EP 1187890 A1 20020320 (EN)

Application

EP 00937606 A 20000518

Priority

- US 0013686 W 20000518
- US 31816499 A 19990525

Abstract (en)

[origin: WO0071642A1] This is a process for upgrading a petroleum naphtha fraction. The naphtha is subjected to reforming and the reformate is cascaded to a benzene and toluene synthesis zone over a benzene and toluene synthesis catalyst comprising a molecular sieve of low acid activity. The preferred molecular sieve is steamed ZSM-5. The benzene and toluene synthesis zone is operated under conditions compatible with the conditions of the reformer such as temperatures of above about 800 DEG F (427 DEG C). In one aspect of the invention, the benzene and toluene synthesis catalyst includes a metal hydrogenation component from group VII(B), specifically rhenium. In one mode of operation, the benzene and toluene synthesis catalyst replaces at least a portion of the catalyst in the reformer. The process produces a product containing an increased proportion of benzene, toluene, and/or xylenes, and a reduced portion of alkylated aromatics, as compared to reformate.

IPC 1-7

C10G 59/02

IPC 8 full level

B01J 29/48 (2006.01); **B01J 29/90** (2006.01); **B01J 37/10** (2006.01); **B01J 38/44** (2006.01); **C10G 35/04** (2006.01); **C10G 47/18** (2006.01); **C10G 59/02** (2006.01); **C10G 69/04** (2006.01)

CPC (source: EP KR US)

C10G 35/04 (2013.01 - KR); **C10G 45/62** (2013.01 - KR); **C10G 59/02** (2013.01 - EP US); **Y02P 20/52** (2015.11 - EP US)

Citation (search report)

See references of WO 0071642A1

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)

WO 0071642 A1 20001130; AU 5275300 A 20001212; CA 2374233 A1 20001130; EP 1187890 A1 20020320; JP 2003500517 A 20030107; KR 20020050756 A 20020627; US 2003038058 A1 20030227

DOCDB simple family (application)

US 0013686 W 20000518; AU 5275300 A 20000518; CA 2374233 A 20000518; EP 00937606 A 20000518; JP 2000620024 A 20000518; KR 20017015032 A 20011124; US 21120202 A 20020802