

Title (en)

METHOD FOR OBTAINING AROMATIC HYDROCARBONS FROM A HYDROCARBON MIXTURE

Title (de)

VERFAHREN ZUR GEWINNUNG VON AROMATISCHEN KOHLENWASSERSTOFFEN AUS EINEM KOHLENWASSERSTOFFGEMISCH

Title (fr)

PROCÉDÉ DE PRODUCTION D'HYDROCARBURES AROMATIQUES À PARTIR D'UN MÉLANGE D'HYDROCARBURES

Publication

EP 2195107 A1 20100616 (DE)

Application

EP 08804544 A 20080922

Priority

- EP 2008062618 W 20080922
- EP 07117510 A 20070928
- EP 08804544 A 20080922

Abstract (en)

[origin: WO2009043753A1] The invention relates to a method for obtaining aromatic hydrocarbons, selected from benzene, toluol, xylol and ethyl benzene or mixtures thereof, from a mixture of hydrocarbons, which in addition contains non-aromatic hydrocarbons and high-boiling components. The method comprises the steps: (A) preparation of a mixture of hydrocarbons a1 and an extractive solvent using a2 from N-formylmorpholine, (B) extractive distillation of the hydrocarbon mixture a1 using the extractive solvent to obtain a mixture b1 containing extractive solvent and the aromatic hydrocarbons, said mixture containing high-boiling components and a mixture b2 containing non-aromatic hydrocarbons, (C) distillation of the mixture b1 of extractive solvent and the aromatic hydrocarbons obtained in step (B), to obtain one or more fractions c1 of aromatic hydrocarbons and the extractive solvent c2 containing high-boiling components, (D) separation of a partial stream d1 from the extractive solvent c2 and return of the extractive solvent c2 to the extractive distillation (B), (E) extraction of the partial stream d1 of the extractive solvent using water to obtain an aqueous extract phase e1 that is essentially devoid of high-boiling components and an organic phase e2 containing the high-boiling components, (F) distillation of the aqueous extract phase e1 and recovery of the extractive solvent a2 in a purified form and return of the extractive solvent to the extractive distillation (B), a distillation being carried out before step (E) takes place, in which distillation a fraction of extremely high-boiling hydrocarbons is separated from the partial stream d1 of the extractive solvent.

IPC 8 full level

B01D 3/40 (2006.01); **B01D 11/04** (2006.01); **C07C 7/10** (2006.01); **C07C 15/04** (2006.01); **C07C 15/06** (2006.01); **C07C 15/073** (2006.01); **C07C 15/08** (2006.01)

CPC (source: EP US)

B01D 3/40 (2013.01 - EP US); **C07C 7/08** (2013.01 - EP US); **C07C 7/10** (2013.01 - EP US); **C07C 15/04** (2013.01 - EP US); **C07C 15/06** (2013.01 - EP US); **C07C 15/073** (2013.01 - EP US); **C07C 15/08** (2013.01 - EP US)

Citation (search report)

See references of WO 2009043753A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA MK RS

DOCDB simple family (publication)

WO 2009043753 A1 20090409; CN 101808704 A 20100818; CN 101808704 B 20121128; EP 2195107 A1 20100616; JP 2011511757 A 20110414; JP 5566291 B2 20140806; US 2010305382 A1 20101202; US 8362314 B2 20130129

DOCDB simple family (application)

EP 2008062618 W 20080922; CN 200880109309 A 20080922; EP 08804544 A 20080922; JP 2010526258 A 20080922; US 68056408 A 20080922