

Title (en)

Thermal hydrocarbon pyrolysis process using an electric furnace

Title (de)

Verfahren zur thermischen Pyrolyse von Kohlenwasserstoffen mit Elektrorofen

Title (fr)

Procédé de pyrolyse thermique d'hydrocarbures utilisant un four électrique

Publication

EP 0542597 B1 19960228 (FR)

Application

EP 92402951 A 19921030

Priority

FR 9113976 A 19911108

Abstract (en)

[origin: EP0542597A1] Process for thermal pyrolysis of hydrocarbons in a reactor (1) of elongate shape, comprising at a first end means (5) for feeding a gas mixture containing at least one hydrocarbon, at the opposite end means (10) for removing the effluents produced and, between these two ends, means (9) for feeding a fluid for cooling the effluents, the reactor comprising, in a first part (first end side), a plurality of means for electrical heating (3) surrounded by sheaths (4) arranged as substantially mutually parallel layers perpendicular to the axis of the reactor so as to define, between the sheaths and/or the sheaths and the walls (22), spaces or passages for the circulation of the gas mixtures and/or of the effluents. These means of heating are suitable for heating the passages in successive cross-sections which are independent and substantially perpendicular to the axis of the reactor. The reactor comprises means for introducing a gas G called sheath gas, preferably containing water vapour and/or hydrogen, into the sheaths (4). The sheaths have a sufficient permeability to allow, at least at certain points, the diffusion of at least a proportion of this gas G from the interior of the sheaths towards the exterior of the sheaths, this gas G being then diluted in the gas mixture. <IMAGE>

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C10G 9/24

IPC 8 full level

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CPC (source: EP US)

C10G 9/24 (2013.01 - EP US); **Y10S 585/921** (2013.01 - EP US); **Y10S 585/926** (2013.01 - EP US)

Cited by

EP0781828A1; EP3725865A1; EP3730592A1; EP0806467A1; FR2748273A1; US5976352A; FR2743007A1; US6027635A; EP0733609A1; FR2732014A1; US11679367B2; US6322760B1; US11505751B2; WO2020046638A1; WO2020047091A1; WO2023016968A1

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