Title (en)

METHOD FOR PRODUCING PROPENE FROM 2-BUTENE AND ISOBUTENE-RICH FEEDING FLOWS

Title (de)

VERFAHREN ZUR HERSTELLUNG VON PROPEN AUS 2-BUTEN- UND ISOBUTEN-REICHEN FEEDSTRÖMEN

Title (fr)

PROCEDE DE PRODUCTION DE PROPENE A PARTIR DE COURANTS D'ALIMENTATION RICHES EN 2-BUTENE ET EN ISOBUTENE

Publication

EP 1856018 A2 20071121 (DE)

Application

EP 06724887 A 20060224

Priority

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- DE 102005009665 A 20050228

Abstract (en)

[origin: DE102005009665A1] Preparation of an ethene stream (C 2), a propene stream (C 3), an isobutene and optionally a 4C-olefin stream (C 4), a 2-methyl-2-butene and optionally 2-butene stream (C 5), and optionally other hydrocarbons containing stream (C x), optionally several separate components containing streams, comprises contacting a C4-hydrocarbon stream with ethene in a metathesis step; and separating the streams. Preparation of an ethene stream (C 2), a propene stream (C 3), an isobutene and optionally 4C olefin stream (C 4), a 2-methyl-2-butene and optionally 2-butene stream (C 5), and optionally other hydrocarbons containing stream (C x), optionally several separate components containing streams, comprises: (A) a metathesis step, in which a C4-hydrocarbon stream, containing at least 2-butene (15 wt.%), at least isobutene (5 wt. %) and 1-butene (less than 5 wt.%) (feed stream), is contacted with ethene in the presence of usual metathesis catalysts; and (B) separation of the streams (C2, C3, C4 and optionally Cx) from the obtained hydrocarbon stream, with the stream (C5) completely or partially led back to the metathesis step. Independent claims are included for methods for preparing feed stream, comprising subjecting naphtha or other hydrocarbon compounds to steam cracking or fluid catalytic cracking (FCC)-process, or dehydrating butane containing hydrocarbon stream and followed by purifying the obtained C4-olefin-mixture containing isobutene, 2-butene, butadiene, optionally butyne and optionally 1-butene, and removing the obtained stream of C4-olefin-mixture; and removing butadiene and butyne by means of selective hydrogenation to butene or butane hydride, or butadiene and butyne by extractive distillation of the obtained C4-olefin-mixture (raffinate I), where the content of 1,3-butadiene is at a maximum of 1000 wt. ppm.

IPC 8 full level

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CPC (source: EP KR US)

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Citation (search report)

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