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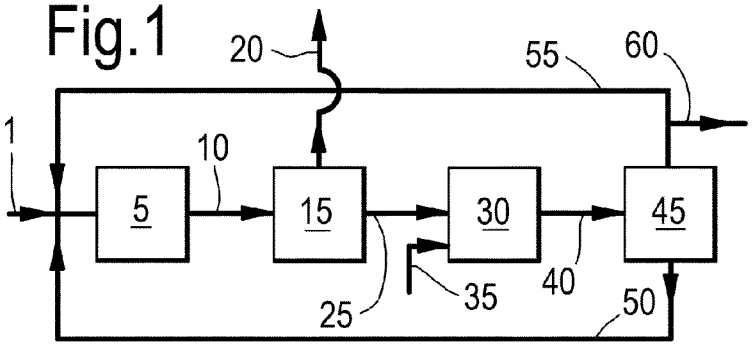
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(54) Title: PROCESS FOR PREPARING ETHYLENE AND PROPYLENE

Fig.1



(57) Abstract: The present invention provides aprocess for preparing ethylene and/or propylene, comprising the steps of a)contacting a stream comprising C4+ olefins with a zeolite-comprising catalyst at a temperature in the range of from 350 to 1000 °C and retrieving an olefinic product stream comprising: - ethylene and/or propylene, and - a C4+ hydrocarbon fraction, comprising paraffins, normal olefins and iso-olefins; b) subjecting at least part of the C4+ hydrocarbon fraction to an etherification process with methanol and/or ethano lwherein at least part of the iso-olefins are converted with methanol and/or ethanol to an tert-alkyl ether, and retrieving an etherification product stream; c) separating at least part of the etherification product stream into at least an ether-enriched stream and an iso- olefin-depleted C4+ hydrocarbon stream; d)withdrawing part of the iso-olefin-depleted C4+ hydrocarbon stream from the process to purge part of the paraffinic C4+ hydrocarbons; e) recycling another part of the iso-olefin-depleted C4+ hydrocarbon stream to step (a); f) converting at least part of the tert-alkyl ether in the ether-enriched stream to ethylene and/or propylene by contacting at least part of the ether-enriched stream with a molecular sieve-comprising catalyst at a temperature in the range of from 350 to 1000 °C.

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