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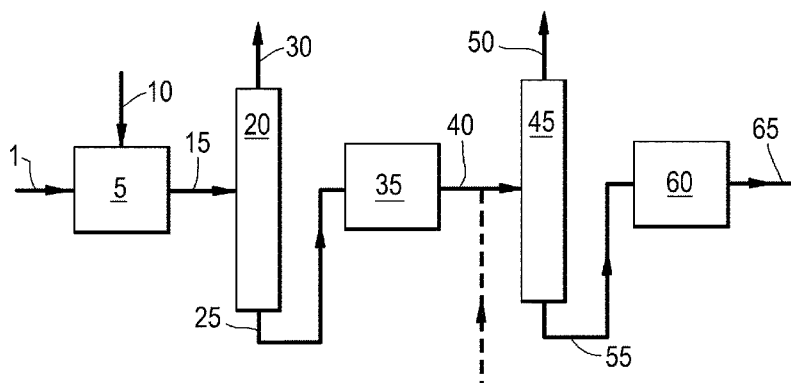
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(54) Title: PROCESS FOR PREPARING ETHYLENE AND/OR PROPYLENE AND AN ISO-OLEFIN-DEPLETED OLEFINIC
PRODUCT

Fig.1



(57) Abstract: The present invention provides a process for preparing ethylene and/or propylene and an iso-olefin-depleted olefinic product, comprising the steps of: a) providing a C5 hydrocarbon-comprising stream, comprising C5 cyclopentene and C5 iso-olefins; b) subjecting the C5 hydrocarbon-comprising stream to an etherification process with methanol and/or ethanol wherein at least part of the C5 iso-olefins are converted with methanol and/or ethanol to a 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 a first iso-olefin-depleted olefinic product; d) 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 and retrieving a second olefinic product comprising ethylene and/or propylene.

