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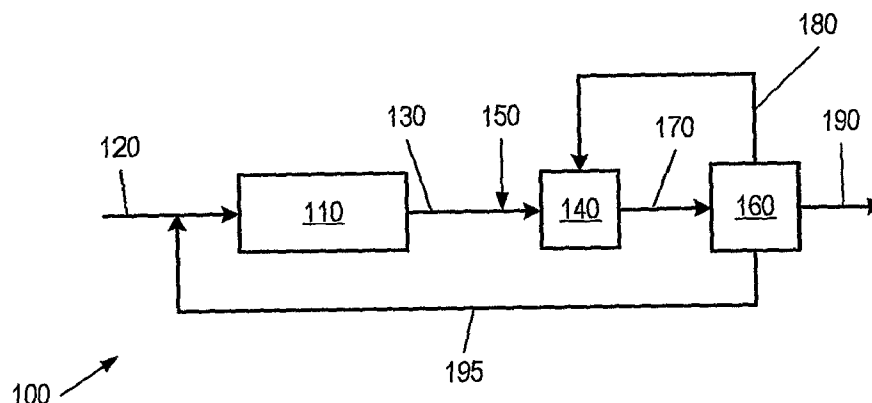
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(54) Title: METHOD OF PREPARING BRANCHED ALKYL AROMATIC HYDROCARBONS USING A PROCESS STREAM FROM A DEHYDROGENATION-ISOMERIZATION UNIT



(57) Abstract: Systems and methods to produce branched alkyl aromatic hydrocarbons are described. Systems may include an olefin dehydrogenation-isomerization unit, an alkylation unit and a separation unit. Methods for producing branched alkyl aromatic hydrocarbons may include treatment of a process stream that includes paraffins and olefins with a dehydrogenation-isomerization unit. The produced olefins may be used to alkylate aromatic hydrocarbons to form branched alkyl aromatic hydrocarbons. After alkylation of the aromatic hydrocarbons, unreacted components from the alkylation process may be separated from the alkyl aromatic hydrocarbons. The unreacted components from the alkylation process may be recycled back into the main process stream or sent to other processing units.

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