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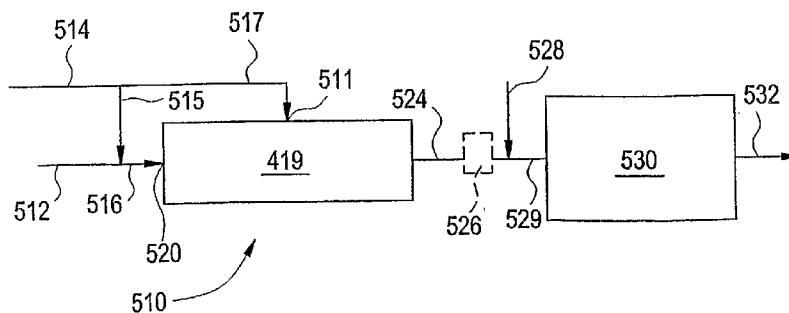
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(54) Title: DOUBLE BOND HYDROISOMERIZATION PROCESS



(57) Abstract: A process and apparatus are disclosed for hydroisomerizing a mixed C4 olefin stream in a catalytic distillation column in order to increase the concentration of 2-butene and minimize the concentration of 1-butene, while concurrently minimizing the production of butanes. In one embodiment, carbon monoxide is introduced into the double bond hydroisomerization reactor along with hydrogen. In another embodiment, hydrogen, and optionally also carbon monoxide, is introduced at multiple locations along the double bond hydroisomerization reactor. The invention is particularly useful in preparing C4 feed streams for metathesis reactions.



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