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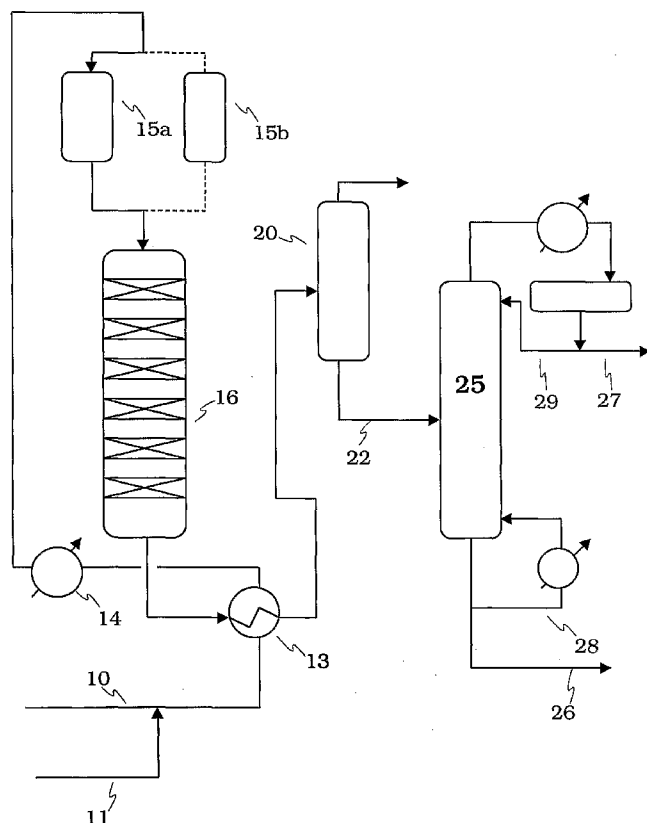
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(54) Title: PROCESS FOR MAKING HIGH OCTANE GASOLINE WITH REDUCED BENZENE CONTENT



(57) Abstract: Solid phosphoric acid (SPA) olefin oligomerization process units may be converted to operation with a more environmentally favorable solid catalyst. The SPA units in which a light olefin feed is oligomerized to form gasoline boiling range hydrocarbon product, is converted unit to operation -with a molecular sieve based olefin oligomerization catalyst comprising an MWW zeolite material. Besides being more environmentally favorable in use, the MWW based zeolites offer advantages in catalyst cycle life, selectivity. After loading of the catalyst, the converted unit is operated as a fixed-bed unit by passing a C₂ - C₄ olefinic feed and a light aromatic co-feed containing benzene to a fixed bed of the MWW zeolite catalyst to effect alkylation of the benzene with the aromatic co-feed, typically at a temperature from 150 to 350°C, a pressure not greater than 7000 kpa, usually less than 4000 kPa and an olefin space velocity up to 10 WHSV.



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