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(54) Title: METHODS FOR PRODUCING OLEFINS

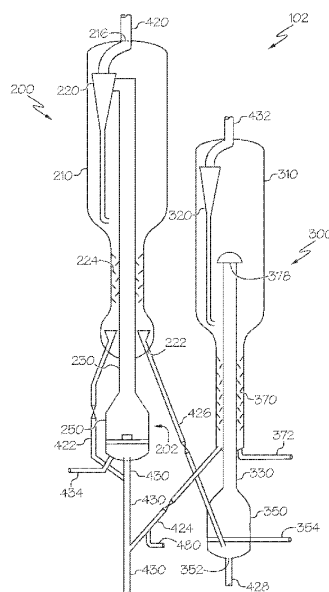


FIG. 1

(57) **Abstract:** According to one or more embodiments of the present disclosure, a method for producing olefins includes contacting a hydrocarbon-containing feed with a catalyst in a reactor portion of a reactor system to form an olefin-containing effluent, separating at least a portion of the olefin-containing effluent from the catalyst, passing the catalyst to a catalyst-processing portion of the reactor system and processing the catalyst to produce a processed catalyst and a combustion gas, passing the processed catalyst from the catalyst-processing portion to the reactor portion, and introducing a combustion additive to the reactor system when the combustion gas comprises one or more hydrocarbons in an amount greater than 5% of an LFL of the combustion gas at a temperature and pressure of the catalyst processing portion. The catalyst may include from 1 ppmw to 150 ppmw platinum. The combustion additive may include from 150 ppmw to 1,000 ppmw platinum.

[Continued on next page]

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