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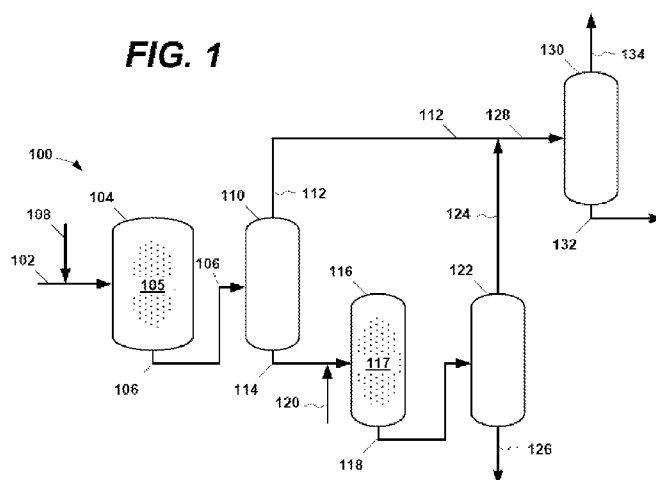
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(54) Title: STAGED PROPYLENE PRODUCTION PROCESS

FIG. 1



(57) Abstract: Processes for forming propylene are described herein. The processes generally include reacting a metathesis feed stream including butene with ethylene in the presence of a first metathesis catalyst via a first metathesis reaction to form a first metathesis product stream including propylene, ethylene, butene, and C5+ olefins; separating at least a portion of the propylene and ethylene from the first metathesis product stream to form a first overhead stream and to form a first de-propenized bottoms stream including butene and C5+ olefins; reacting at least a portion of the first de-propenized bottoms stream with ethylene in the presence of a second metathesis catalyst via a second metathesis reaction to form a second metathesis product stream including propylene, ethylene, butene, and C5+ olefins; and separating at least a portion of the propylene and ethylene from the second metathesis product stream to form a second overhead stream; and recovering propylene from the first overhead stream, the second overhead stream or combinations thereof.