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(54) Title: PROCESSES AND SYSTEMS FOR UPGRADING A HYDROCARBON

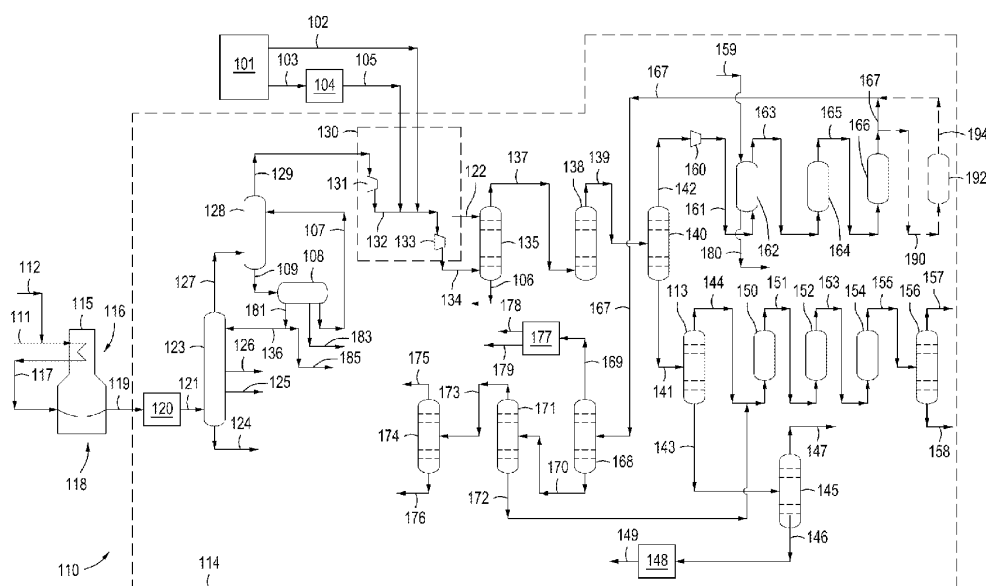


FIG. 1

(57) **Abstract:** Processes are provided for removing contaminants from a refinery gas. Such process can include recovering a process gas comprising ethylene and propylene from a steam cracker effluent recovered from a steam cracker in a steam cracker facility. A refinery gas can be recovered from a refinery facility. The process gas can be compressed in a plurality of compressor stages. A pressure of the refinery gas can be determined. A compressor stage in the plurality of compressor stages can be selected for introducing the refinery gas using the determined pressure of the refinery gas. The refinery gas can be introduced into the selected compressor stage to produce a combined gas that can include the process gas and the refinery gas. At least a portion of one or more impurities can be removed from the combined gas in the steam cracker facility to produce an upgraded combined gas.

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Declarations under Rule 4.17:

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

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