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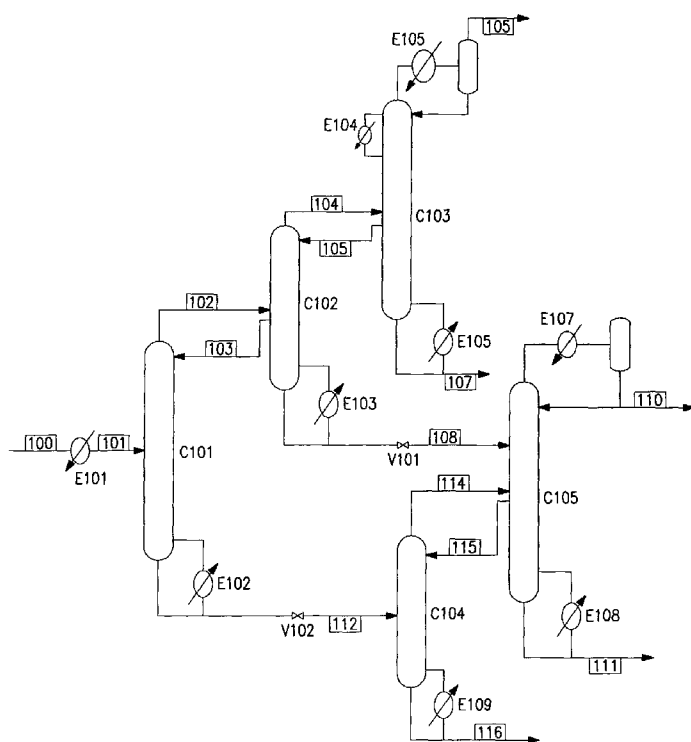
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(54) Title: IMPROVED DISTILLATION SEQUENCE FOR THE PURIFICATION AND RECOVERY OF HYDROCARBONS



(57) Abstract: This invention is an improved distillation sequence for the separation and purification of ethylene from a cracked gas. A hydrocarbon feed enters a C2 distributor column. The top of the C2 distributor column is thermally coupled to an ethylene distributor column, and the bottoms liquid of a C2 distributor column feeds a deethanizer column. The C2 distributor column utilizes a conventional reboiler. The top of the ethylene distributor is thermally coupled with a demethanizer column, and the bottoms liquid of the ethylene distributor feeds a C2 splitter column. The ethylene distributor column utilizes a conventional reboiler. The deethanizer and C2 splitter columns are also thermally coupled and operated at a substantially lower pressure than the C2 distributor column, the ethylene distributor column, and the demethanizer column. Alternatively, a hydrocarbon feed enters a deethanizer column. The top of the deethanizer is thermally coupled to an ethylene distributor column, and the ethylene distributor column utilizes a conventional reboiler. The top of the ethylene distributor column is thermally coupled with a demethanizer column, and the bottoms liquid of the ethylene distributor column feeds a C2 splitter column. The C2 splitter column operates at a pressure substantially lower than the ethylene distributor column, the demethanizer column, and the deethanizer column.

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