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(54) Title: CYCLOHEXANE DEHYDROGENATION

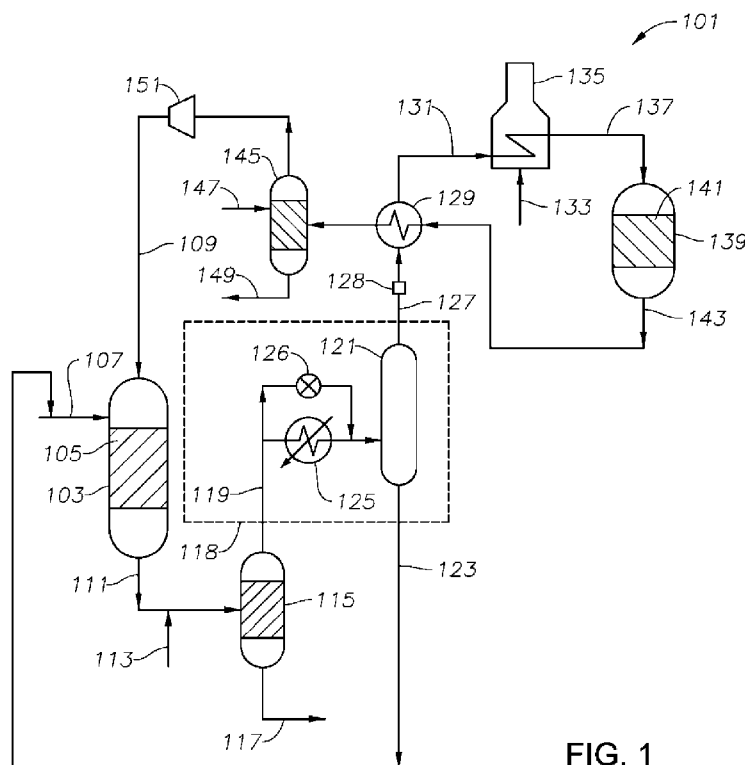


FIG. 1

(57) Abstract: A cyclohexane dehydrogenation process comprising a step of providing, as a benzene-containing stream, a vapor phase in equilibrium with a liquid phase at a condensation separation system; supplying benzene, hydrogen, and cyclohexane into a dehydrogenation reactor where at least part of the benzene supplied is from the benzene-containing stream. The use of a condensation separation system enables the control of the partial pressure of benzene in the material fed into the dehydrogenation reactor by controlling the temperature of the vapor phase, and hence the control of hydrogen to benzene molar ratio in the dehydrogenation reactor. The process results in a long life of the dehydrogenation catalyst due to reduced coking.



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