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 <i>C07C 13/28</i> (2006.01)</p> | <p>(74) Agents: CHEN, Siwen et al.; Exxonmobil Chemical Company, Law Technology, P. O. Box 2149, Baytown, TX 77522-2149 (US).</p> |
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[Continued on next page]

- (54) Title:** SYSTEM AND PROCESS FOR MAKING CYCLOHEXYLBENZENE

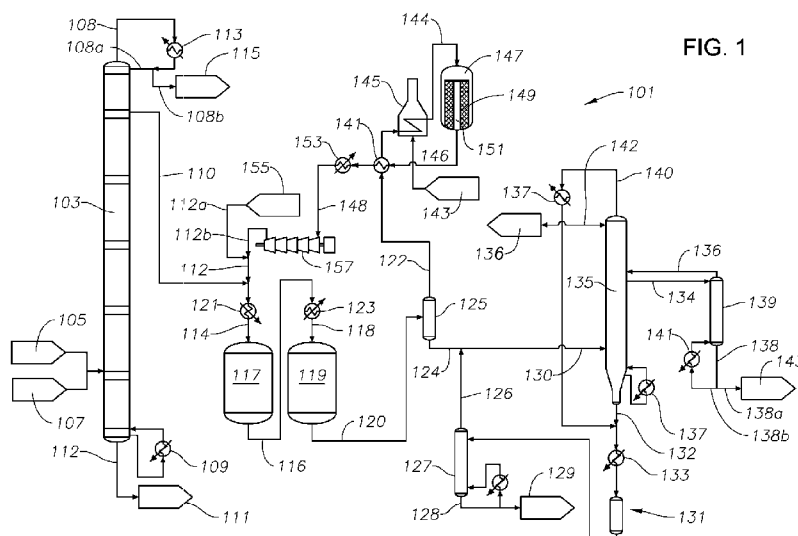


FIG. 1

- (57) Abstract:** A system for making cyclohexylbenzene starting from benzene and hydrogen includes a first benzene preparation column, a hydroalkylation reactor, a dehydrogenation reactor, a second distillation column for cyclohexylbenzene separation, a third distillation column for cyclohexylbenzene purification, a transalkylation reactor, and a fourth distillation column for separating cyclohexylbenzene from transalkylation effluent. All components are integrated to achieve a high-purity cyclohexylbenzene product produced with a high yield and high overall energy efficiency.

**Declarations under Rule 4.17:**

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- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

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