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(54) Title: PROCESS FOR MAKING PHENOL AND/OR CYCLOHEXANONE

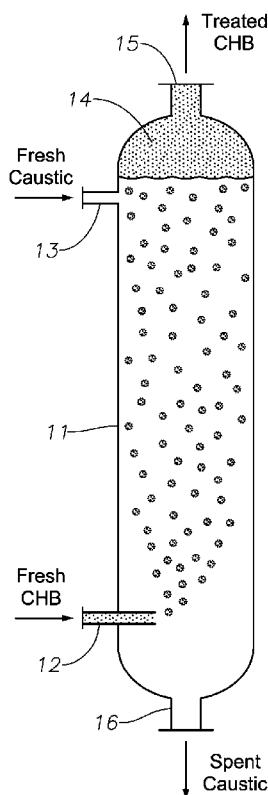


FIG. 1

(57) Abstract: A process for making phenol and/or cyclohexanone comprises: (A) oxidizing a cyclohexylbenzene feed to obtain an oxidation product comprising cyclohexylbenzene, cyclohexyl-1-phenyl-1-hydroperoxide and phenol; (B) separating at least a portion of the oxidation product to obtain a first fraction comprising cyclohexyl-1-phenyl-1-hydroperoxide and a second fraction comprising cyclohexylbenzene and phenol; (C) removing at least a portion of the phenol from at least a portion of the second fraction to obtain a third fraction; (D) recycling at least a portion of the cyclohexylbenzene in the third fraction to the oxidizing step (A); and (E) contacting at least a portion of the cyclohexyl-1-phenyl-1-hydroperoxide in the first fraction with an acid catalyst in a cleavage reactor under cleavage conditions to obtain a cleavage product comprising phenol and cyclohexanone.



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