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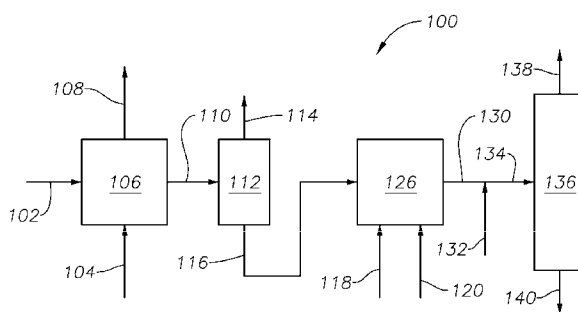
(54) **Title:** PROCESS FOR PRODUCING PHENOL

FIG. 1

(57) **Abstract:** In a process for producing phenol and/or cyclohexanone, a cleavage reaction mixture containing cyclohexyl-1-phenyl-hydroperoxide and cyclohexylbenzene is contacted with sulfuric acid and water under cleavage conditions effective to form a cleavage reaction effluent containing phenol, cyclohexanone, cyclohexylbenzene, water, sulfuric acid and 1-phenylcyclohexanol. At least a portion of the cleavage reaction effluent is neutralized with a basic material to produce a neutralized cleavage product and at least a portion of the neutralized cleavage product is supplied in the absence of an added dehydration catalyst to a distillation column. The distillation column is operated so that at least a portion of the neutralized cleavage product is exposed to a temperature greater than 70°C at least one location in the distillation column whereby at least a portion of the 1-phenylcyclohexanol in the neutralized cleavage product is dehydrated to phenylcyclohexene.