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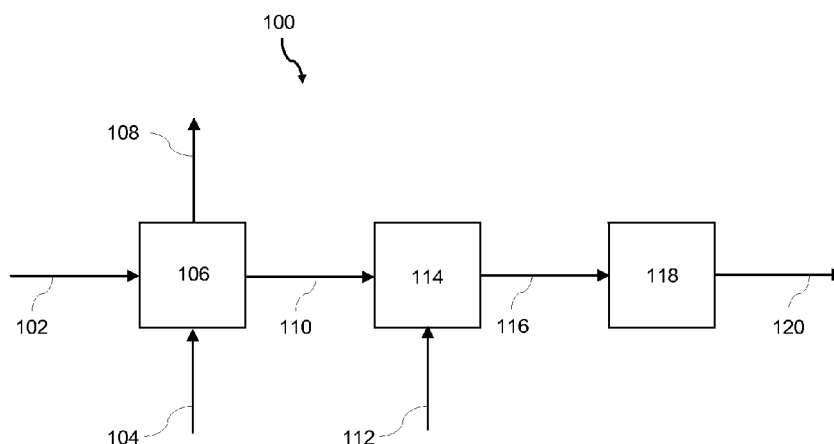
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(54) Title: CYCLOHEXYLBENZENE HYDROPEROXIDE COMPOSITIONS

Figure 1



(57) Abstract: In a process for producing phenol and cyclohexanone, a feed comprising cyclohexylbenzene is oxidized to produce an oxidation reaction product comprising cyclohexyl-1-phenyl-1-hydroperoxide. At least a portion of the oxidation reaction product is then cleaved to produce a cleavage reaction product comprising phenol, cyclohexanone, and at least one contaminant. At least a portion of the cleavage reaction product is contacted with an acidic material to convert at least a portion of the at least one contaminant to a converted contaminant and thereby produce a modified reaction product. The oxidation reaction product may have at least 50 wt% of cyclohexylbenzene, no greater than 80 wt% of cyclohexyl-1-phenyl-1-hydroperoxide, and 0.1 wt% to 10 wt% of another hydroperoxide.