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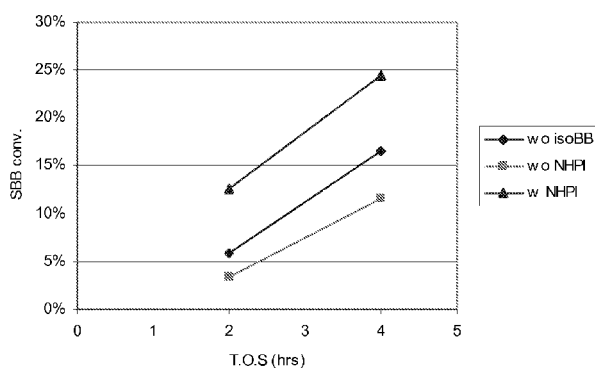
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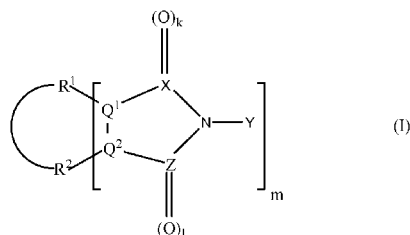
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(54) Title: PROCESS FOR PRODUCING ALKYL BENZENE HYDROPEROXIDES

Figure 13



(57) Abstract: In a process for producing alkylbenzene hydroperoxides, a feed comprising (i) secbutylbenzene, (ii) cumene in an amount greater than 10 wt% of the total feed and (iii) at least one of iso-butylbenzene and tert-butylbenzene in an amount up to 20 wt% of the total feed is contacted with an oxygen-containing gas in the presence of a catalyst comprising a cyclic imide of the general formula (I): wherein each of R¹ and R² is independently selected from hydrocarbyl and substituted hydrocarbyl radicals having 1 to 20 carbon atoms, or from the groups SO₃H, NH₂, OH, and NO₂ or from the atoms H, F, Cl, Br, and I, provided that R¹ and R² can be linked to one another via a covalent bond; each of Q¹ and Q² is independently selected from C, CH, N and CR³; each of X and Z is independently selected from C, S, CH₂, N, P and elements of Group 4 of the Periodic Table; Y is O or OH; k is 0, 1, or 2; l is 0, 1, or 2; m is 1 to 3; and R³ can be any of the entities listed for R¹. The contacting is conducted under conditions to convert the sec-butylbenzene and cumene to their associated hydroperoxides.



**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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