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(54) Title: PROCESS FOR PREPARING ALKYLENE OXIDE

(57) Abstract: Process for the preparation of alkylene oxide which process comprises: (a) oxidation of an organic compound to obtain a hydroperoxide containing stream, (b) washing the hydroperoxide stream with a basic aqueous solution, (c) washing the hydroperoxide stream of step (b) with water, (d) optionally subjecting the hydroperoxide stream obtained in step (c) to distillation, (e) contacting at least part of the hydroperoxide stream obtained in step (c) and/or (d) with alkene and a heterogeneous catalyst to obtain a reaction mixture containing a hydroxyl containing compound and alkylene oxide, and (f) separating at least part of the alkylene oxide from the reaction mixture, in which process the alkene added in step (e) has a temperature of from 60 to 120 °C while the temperature of the hydroperoxide stream contacted with the alkene is similar to the temperature of the hydroperoxide stream obtained in step (c) and/or (d).

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