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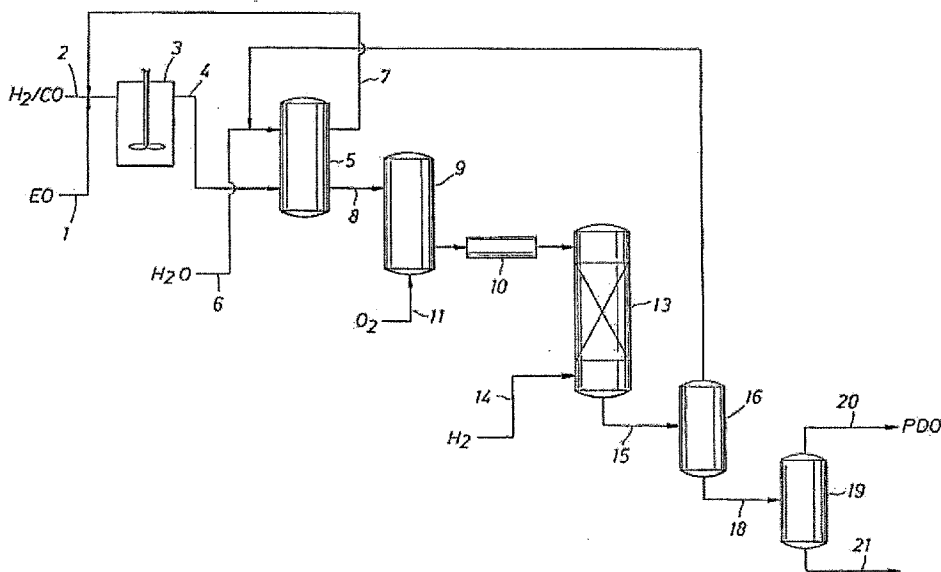
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(54) Title: TREATMENT OF AN AQUEOUS MIXTURE CONTAINING AN ALKYLENE OXIDE WITH AN ION EXCHANGE RESIN



(57) Abstract: A process for separating an alkylene oxide from an aqueous mixture is provided in which no detectable dioxane byproduct is formed. An aqueous mixture containing an alkylene oxide is contacted with a carboxylic acid ion exchange resin to separate the alkylene oxide from the aqueous mixture. The ion exchange capacity of the resin is regenerated with an acid wash at a temperature of at least 60°C, wherein regeneration of the resin does not result in the formation of dioxane in the spent acid wash. The process is particularly useful in purifying an aqueous 3-hydroxypropionaldehyde solution derived from an aqueous extraction of a hydroformylation reaction mixture containing ethylene oxide.

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