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- (54) Title:** METHODS FOR ALKYLENE OXIDE SEPARATION USING EXTRACTIVE DESTILLATION COLUMNS

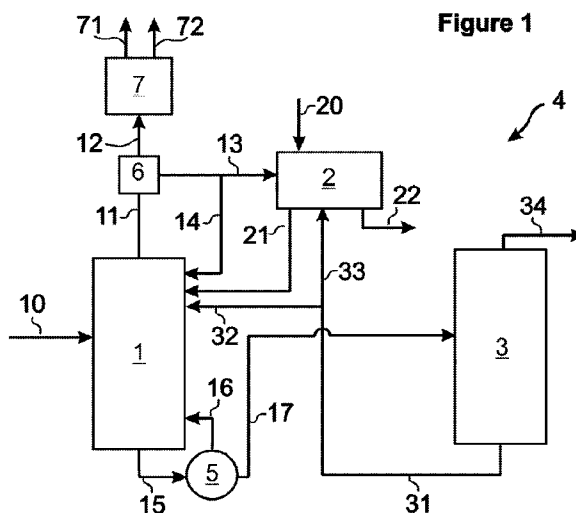


Figure 1

- (57) Abstract:** The disclosure relates to a process for separating propylene oxide for a crude propylene oxide stream, for example an intermediate stream from a PO/TBA process. The crude propylene oxide stream can be passed through an extractive distillation column. The distillation column is operated at a pressure in a range of greater than 25 up to 50 psig, and/or at a temperature in a range of from 70 to 150 degrees Celsius using C₈-C₂₀ paraffin as extractive solvent with an overhead distillate water wash drum. The crude propylene oxide stream include from 0.001 to 0.1 wt% methanol, based on the total composition of the crude propylene oxide stream. The systems, methods, and apparatuses can produce a propylene oxide stream having less formaldehyde and acetaldehyde than the prior art.