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(54) Title: EPOXIDATION PROCESS

(57) Abstract: This invention is a process for producing propylene oxide. The process comprises first contacting a titanium zeolite with a reaction feed comprising propylene, hydrogen peroxide, tertiary butyl alcohol, and water to produce a product stream comprising propylene, propylene oxide, propylene glycol, tertiary butyl alcohol, and water. The product stream is distilled to produce a first overhead stream comprising propylene and a first bottoms stream comprising propylene oxide, propylene glycol, tertiary butyl alcohol, and water. The first bottoms stream is distilled to produce a second overhead stream comprising propylene oxide and a second bottoms product stream comprising propylene glycol, tertiary butyl alcohol, and water. The second bottoms stream is distilled to produce a third overhead stream comprising an azeotrope of tertiary butyl alcohol and water and a third bottoms stream comprising propylene glycol and water.



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