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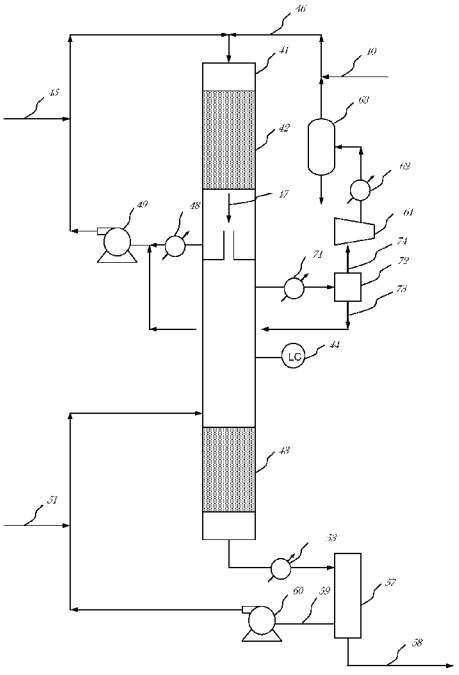
(54) Title: PROCESS FOR PRODUCING CUMENE

Figure 2



(57) Abstract: In a process for producing cumene from acetone and benzene, a feed stream comprising acetone is contacted with hydrogen in the presence of a hydrogenation catalyst in a first reaction zone under hydrogenation conditions sufficient to convert at least part of the acetone to isopropanol and produce a first liquid effluent stream rich in isopropanol and a first vapor stream rich in unreacted hydrogen. Benzene is then added to at least part of the first liquid effluent stream, without intermediate purification of the first liquid effluent stream, and optionally to at least part of the first vapor stream, to form a second feed stream. The second feed stream is then contacted with an alkylation catalyst in a second reaction zone separate from the first reaction zone under alkylation conditions sufficient to maintain at least part of the second feed stream in the liquid phase and to cause at least part of the isopropanol in the second feed stream to react with the benzene to form cumene and water and produce a second effluent stream comprising at least cumene, water and unreacted benzene. Hydrogen is separated from the first vapor stream and/or the second effluent stream. At least part of the hydrogen is recycled to the first reaction zone and/or purged from the system.

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