

CUMENE OXIDATION PROCESS

ABSTRACT

Greater efficiency in a water-alkaline emulsion cumene oxidation process using a cascade of reactors is obtained by splitting the reactor cascade into 2 stages with the first stage utilizing NH_4NaCO_3 as the active carbonate in the stage containing less than 18% by weight cumene hydroperoxide and using Na_2CO_3 as the active carbonate in the stage containing more than 18% by weight cumene hydroperoxide. By directly injecting ammonia into a recycle stream organic acids are efficiently neutralized. A counter current water wash of the second stage also increases process efficiency by scrubbing out unwanted impurities. Control of pH in the process improves efficiency and reduces impurity levels.

Figure 3