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(54) Title: METHOD FOR THE DECOMPOSITION OF CUMENE HYDROPEROXIDE

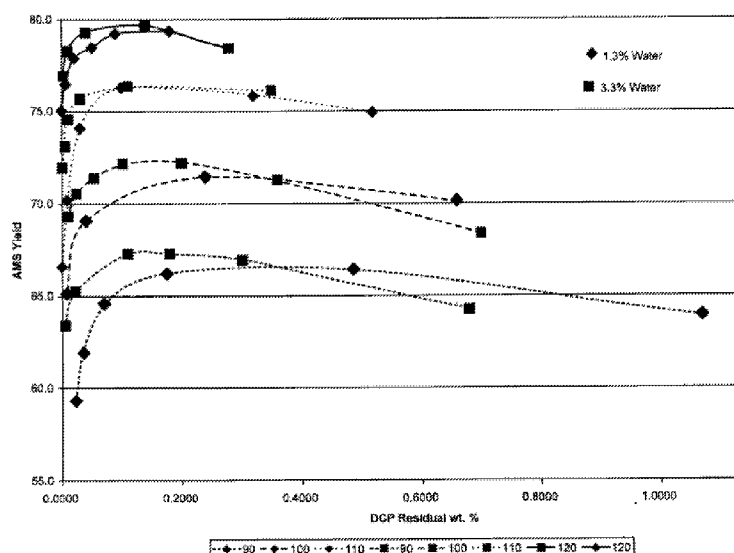


FIGURE 1

(57) Abstract: An improved method for the production of phenol, acetone and alpha-methyl styrene (AMS) from a cumene hydroperoxide and dimethylbenzyl alcohol (DMBA) mixture is described, wherein 0.5 - 5% additional water by weight is added prior to the final DMBA dehydration step, carried out in the presence of about 20 - 400 ppm mineral acid catalyst at 110 - 150 C for 0.5 to 40 minutes residence time. The use of additional water allows greater flexibility in maintaining optimum temperature in the second stage over a much broader turn-down range with fixed equipment, decreases the residual dicumyl peroxide (DCP) at the yield optimum for a given temperature, and increases the overall yield of AMS at optimum conditions at a given temperature.