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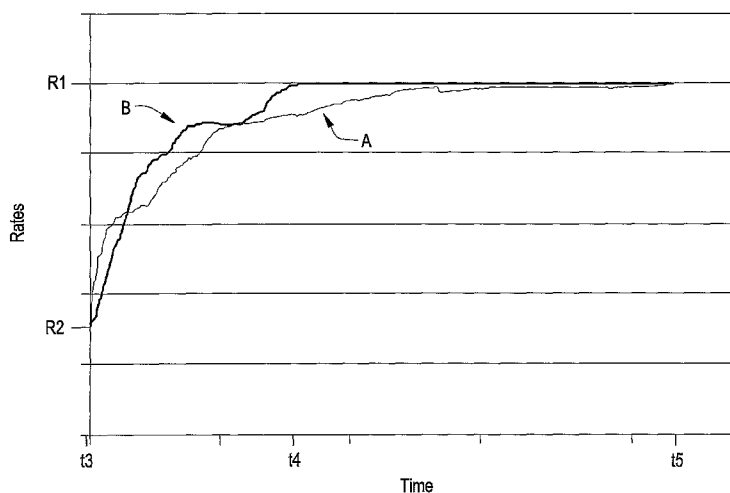
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(54) Title: METHOD OF CONTROLLING ACETIC ACID PROCESS



(57) Abstract: A method is disclosed for controlling a methanol carbonylation process for producing acetic acid. The method includes the steps of monitoring the rate of production of the acetic acid; reducing the production rate in response to a change in a process condition or a process equipment condition; after the production rate is reduced, controlling the process at the reduced production rate; and increasing the production rate after the condition change has been addressed until at least the production rate returns to a normal operating range; wherein during at least one of the steps of reducing the production rate, controlling the process at the reduced production rate, and increasing the production rate until the production rate returns to a normal operating range, the process is controlled by nonlinear multivariable control based on a model of the process. Also disclosed is a process for producing acetic acid, in which at least a reaction section of the process is controlled using a multivariable nonlinear predictive controller based on a nonlinear model of the process. Control of the process is based on the same model during normal operations, during process-upset conditions and also during a recovery period after the upset has been addressed.



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