

Optimal temperature control policy of batch process under seasonal fluctuation

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Batch reaction is a process of great importance to the chemical industry due to its low volume yet high value products. Since temperature of batch reactor strongly influences the reactor rate, it has a temperature control system to keep the temperature at a desired value. And the control system operates differently on seasons. In this study, we focused on the optimal temperature control policy to minimize the energy cost of batch reactors under seasonal fluctuation.