THERMOKINETIC OSCILLATIONS AT OXIDATION AND COMBUSTION OF METHANE

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Abstract: Numerical analysis of the kinetics of methane oxidation in a continuous stirred tank reactor has shown the possibility of oscillating modes at certain values of the process parameters. The oscillating behavior of the process is associated both with its kinetics and processes of heat and products generation and removal. Oscillations occur only in a relatively small range of parameters that characterize the properties of the system, but may be accompanied by a significant change in the yield of products.

Keywords: thermokinetic oscillations; oxidation and combustion of methane; computer simulation

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