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论文

QUALITATIVE ANALYSIS FOR A THIRD-ORDER DIFFERENTIAL EQUATION IN A MODEL OF CHEMICAL SYSTEMS

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摘要 In this paper a mathematical model of chemical systems is investigated. We present the conditions for the existence and local stability of the steady states and the periodic solution of the Hopf type. Specifically, we show by using an ana-lytical method that there may exist two or four Hopf bifurcation points separated at a finite distance from each other; at the same time, a technique for studying the Hopf bifurcation value is given.

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Key words Periodic solution of Hopf type determination of Hopf bifurcation value

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