RESEARCH PAPERS

稳态目标优化的稳定MIMO约束预测控制

黄德先, 王京春, 金以慧

Department of Automation, Tsinghua University, Beijing 100084 China

摘要   A two-stage multi-objective optimization model-predictive control algorithms(MPC) strategy
is pre sented. A domain MPC controller with input constraints is used to increase freedom for steady-state objective and enhance stabilization of the controller. A steady-state objective optimization algorithm oriented to transient process is adopted to realize optimization of objectives else than dynamic control. It is proved that .the stabilization for both dynamic control and steady-state objective optimization can be guaranteed. The theoretical results are demonstrated and discussed using a distillation tower as the model. Theoretical analysis and simulation results show that this control strategy is efficient and provides a good strategic solution to practical process control.

关键词   predictive control   constraint control   optimization   stability

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Stable MIMO Constrained Predictive Control with Steady state Objective Optimization

HUANG Dexian, WANG Jingchun, JIN Yihui

Department of Automation, Tsinghua University, Beijing 100084 China

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for steady-state objective and enhance stabilization of the controller. A steady-state
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Key words   predictive control; constraint control; optimization; stability

通讯作者:
黄德先
作者个人主页: 黄德先; 王京春; 金以慧

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- 黄德先
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