عنوان مقاله:
Multivariable Controller Design For Distillation Column

محل انتشار:
چهارمین کنفرانس مهندسی برق و الکترونیک ایران (سال: 1391)

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خلاصه مقاله:
The control problem of a multi-componentdistillation column is discussed in this paper. Distillation columnsare known to be difficult to control due to their ill-conditionedand nonlinear behavior. We propose a robust control systemfor a distillation column. The interactions between subsystemsare considered as uncertainty. The original nonlinear model ofthe column is of high order and it includes parametricuncertainty. A reduced-order linearized model of the distillationcolumn is used to design a , LQG/LTR and MIMO PIDcontrollers which ensures robust stability of the closed loopsystem and fulfillment of certain design specifications. Then,several simulations of the closed loop systems with the nonlineardistillation column model have been performed to compare thecontrollers for excellent performance against uncertainty,tracking and disturbance rejection

کلمات کلیدی:
H Controller, LQG/LTR Controller, MIMO PID controller, Distillation Column