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Effectiveness of PID-regulator Fullness for Control of Multi-Channel Objects

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Abstract

In the solution of the problem of control of multi-channel objects which has many crossing connections truncated PID-regulators are often used, which has proportional, derivative and integrating elements only in the main diagonal. In the rest channels of such regulator integrating element is absent. Logic of such choice is based on the proposition that for astatic control of N output values it is sufficient of the using of N integrators. But the researches indicated that in some cases such approach restricts the possibilities of the joint achievement of demanded dynamic and static accuracy. The comparing of the control results is tested on the example.

Key words

Automation, Regulators, Multi-channel Systems, Numerical Optimization, Modeling

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