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Adaptive System for Temperature Control of Thermal Excanger

Maxim Skorospeshkin, Vladimir Skorospeshkin, Gennadiy Tsapko

Abstract

The paper demonstrates the possibility of creating of adaptive system of automatic control of thermal exchanger temperature on the base of PI-regulator and successive adaptive pseudo-linear correcting elements with phase forestalling, which increases the phase stability margin for the case of changing of controlled object parameters. It is established that the use of such proposed adaptive system allows sufficient increasing of the quality of transient processes in systems of automatic control of non-stationary objects. On the base of the accomplished researches, the conclusion is made that the quality of the proposed system remains much better if compared with this of system with PI-regulator when the delay of object is changing.

Key words

Adaptive system of control, pseudo-linear chain with phase forestalling, non-stationary controlled object, quality of control.

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Information about the Authors

Maksim V. Skorospeshkin. Institute of Cybernetics in Tomsk National Researching Politecnical University. Deputy Professor of Department of Automation and Computer Systems. PhD. E-mail: <u>smax@tpu.ru</u>.

Vladimir N. Skorospeshkin. Institute of Cybernetics in Tomsk National Researching Politecnical University. Deputy Professor of Department of Automation and Computer Systems. PhD. E-mail: shedar@tpu.ru.

Gennady P. Tsapko. Institute of Cybernetics in Tomsk National Researching Politecnical University. Professor. Head of Department of Automation and Computer Systems. Doctor of Technical Sciences. E-mail: <u>tsapko@aics.ru</u>.