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Eremin E.L. (ereminel@mail.ru)
Amur State University

MODIFICATION OF REGULATOR OF ROBUST CONTROL SYSTEM FOR NONLINEAR SISO-PLANT WITH INPUT CONSTRAINT

This article analyses robust control systems in a scheme with the parallel reference model and the filter-corrector on single-input and single-output (SISO) plant under saturation of the control signal. This signal functions under parametric uncertainty and with limited uncontrollable hindrances and measure only an operated variable. We offered to modify the structure of nonlinear robust regulator by means of dynamic switching of values of its transmission ratio for the purpose of partial or full indemnification of saturation referring to the control.

Keywords: nonlinear SISO plant, control with saturation, prior uncertainty, nonlinear robust regulator, operated dynamic switch, hyperstability, L -dissipativity.

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