
Adaptive control system of the industrial robot actuator

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The main objective of this research is to examine the development of an adaptive control system of the industrial robot actuator in which automatic control of operating modes is carried out, depending on the drive loading, similarly to the human hand actions. Thus, we formulated the purposes of control and selected its criterion providing the system with the specified adaptive properties. Moreover, we found an approach to implementing the control and received the block diagram of the control system. The findings of the research illustrate the algorithms of self-adjustment and resistance assessment in the driving shaft. As a result, we received the differential equations describing the adaptive actuator operation.

Keywords: industrial robot, actuator, adaptive control.

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