

К. П. АКИНИН

СТРУКТУРНАЯ МИНИМИЗАЦИЯ
ЭЛЕКТРОПРИВодОВ
МАЛОЙ МОЩНОСТИ НА ОСНОВЕ
БЕСКОНТАКТНЫХ ДВИГАТЕЛЕЙ
С ПОСТОЯННЫМИ МАГНИТАМИ

$$L \frac{di_d}{dt} = -R i_d + p L \omega i_q + u_d$$

$$L \frac{di_q}{dt} = -R i_q - p L \omega i_d - k_m \omega + u_q$$

$$J \frac{d\omega}{dt} = M - M_c$$

$$\frac{d\theta}{dt} = \omega$$

$$M = 0,5 m_f k_m i_q$$

Technical sciences. K.P. Akinin. "**Structural minimization of low-power electric drives based on contactless motors with permanent magnets**". Kyiv: Pro Format, 2020. 392 (22,8) p. Circulation - 300 copies.

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The monograph is devoted to the construction of low-power electric drives based on contactless motors with permanent magnets. The principles of construction are stated and the structures of electric drives with a minimized set of functional elements are proposed. The processes of formation of stator currents and torque characteristics, the methods of sensor signals formation and regulation of the motor's mechanical coordinates under the accepted structural constraints are investigated. Examples of electric drive structures for achieving new functionalities of electromechanical devices are given.