
High torque synchronous motor mathematical model development under the design of precision drives

© M.V. Baranov, O.A. Korchagin

Scientific Production Firm «Polytech», Moscow, 123001, Russia

A rapid nonlinear model of servodrive with trapezoidal wave of EMF is considered. Technical demands involve high torque moment drive, smoothness of control and restrictions of mass and construction dimensions. A characteristic feature of developed mathematical model is the choice of its parameters on the basis of experimental data.

Keywords: *Rapid mathematical model of synchronous motor with trapezoidal wave of EMF, high specific torque moment, high smoothness controlled movement.*

Baranov M.V. (b. 1954) graduated from Bauman Moscow Higher Technical School in 1977. Ph.D., Senior Researcher, General Director of the Scientific Production Firm «Polytech». Author of more than 39 publications and 3 monographs in the field of electric drive and development of digital control systems. e-mail: info@npf-polytech.ru

Korchagin O.A. (b. 1982) graduated from Bauman Moscow State Technical University in 2005. Head of the Department of Scientific Production Firm «Polytech». Author of 4 publications in the field of electric drive and development of digital control systems. e-mail: koroleg@inbox.ru
