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INCREASE OF THE ELECTRIC DRIVE LOAD UNDER ACTION OF GYROSCOPIC MOMENT

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Authors

A. Antonov, V. Kireyev, I. Petukhov

Institute of Electrodynamics National Academy of Science of Ukraine,
pr. Peremohy, 56, Kyiv-57, 03680, Ukraine,
e-mail: aoe@ied.org.ua

Abstract

The mechanism of the load on the drive motor, when changing its position in space is considered. As shown, the source of the load is the gyroscopic moment, the action of which the resistance increases in the rotor bearings. The dependence of the load torque from the kinetic moment of the rotor and from the rotor angular velocity of its rotation is obtained. It was found that for devices with active compensation of the gyroscopic moment mainly in the choice of drive power there is time to operation. References 5, figures 5, table 1.

Key words: a high-speed electric drive, the gyroscopic moment, the braking moment.

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