Dear editors:

Please consider our manuscript, “Experimental study of the VFD's speed stabilization (retention) efficiency under torque disturbances”, for publication in the International Journal of Power Electronics and Drive Systems.

The article proposes technique for experimental research of variable frequency drives experiencing periodic torque disturbances of variable frequency. The technique is based on the nonlinear transfer function of a link of an asynchronous electric motor, which forms an electromagnetic torque, proposed in previously published articles. The dependence of the transfer function on the frequency of the stator voltage and slip determines the research methodology. Experiments have shown the advantage of the dynamic characteristics of a drive with a positive feedback on the stator current over electric drives with traditional control methods (vector and scalar sensorless), and in terms of dynamic characteristics they also exceed drives with a vector control closed in motor speed. These advantages are retained when the frequency of change of the disturbing torque is changed from 0 to 5 Hz. This paper has an applied character and will be useful both to scientists and engineers working with variable frequency drives.

We will be glad to constructive criticism of our manuscript and consider all possible comments.

Best regards,

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