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SENSORLESS CONTROL OF SWITCHED RELUCTANCE MOTORS OF TRACTION ELECTROMECHANICAL SYSTEMS

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Abstract

In the paper a sensorless control system of switched reluctance motors, which can be used in the structure of traction electromechanical systems, is proposed. This modify of sensorless control allows to simplify the structure of the electromechanical system, estimating the magnitude of the rotor angular position using measured electrical parameters eliminating the need of use a position sensor on the motor shaft. The position estimating is performed using the identification of the change of winding inductances of the traction electric machine when the test voltage pulses are applied. The efficiency of the proposed solutions is proved by mathematical *modeling.* References 10, figures 4.

Key words: switched reluctance motor, sensorless control, current control, torque.

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