

عنوان مقاله:

Direct Torque Control of PWM Current-Source-Inverter-Fed Induction Motor

محل انتشار:

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خلاصه مقاله:

In this paper, a novel method for direct torque control of induction motor is proposed. This method is based on direct torque control with pulse width modulation of current source inverter (DTC-PWM-CSI) Using simulink/matlab simulators for its performance assessment. The proposed control system is realized based on statorflux- oriented reference. It uses the same method as direct torque control drive systems with voltage source inverter (DTC-VSI) to estimate the stator flux and electromagnetic torque, therefore only needs the stator resistance to control the motor. In this method, stator current components are calculated to directly control the stator flux and electromagnetic torque. Simulation results show the excellent performance of this system. Using simulations, the proposed method is also compared with the DTC-VSI system, and it is shown that the proposed method improves the Induction motor performance and decreases the inverter switching losses.

کلمات کلیدی:

Induction motor drives, Direct Torque Control, Current Source Inverter

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