عنوان مقاله:

Direct Torque Control of Switched Reluctance Motors Using Four Level Convertor

محل انتشار:

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خلاصه مقاله:

Switched reluctance motors (SRM) have several features, including an intrinsic simplicity, low cost, low inertia and high starting torque. However, it suffers large torque ripple and acoustical noise especially in high speed region. In high speed region, the SRM phase excitation time is very shortcompared to the low speed region. In this region, the excitation current cannot be built-up sufficiently. Also, the demagnetization current can be easily extended to the negative torque region. This may create high ripple in the output torque. To obtain a fast current and suitable demagnetization current, afour level converter and DTC with new switching algorithm is used. The proposed switching algorithm is demonstrated through the computer simulation in MATLAB/Simulink. Then,the obtained results are verified by comparison with the corresponding results of DTC with conventional asymmetric converter.

کلمات کلیدی:

switched reluctance motor, direct torque control, four level converter