عنوان مقاله:

A Comparative Study of DTC-SVM with Three- Level Inverter and an Improved Predictive Torque Control Using Two-Level Inverter

محل انتشار:

دومین کنفرانس بین المللی الکترونیک قدرت و سیستم های درایو (سال: 1389)

تعداد صفحات اصل مقاله: 6

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خلاصه مقاله:

In this paper two methods of torque control for induction motor have been investigated. First DTC method is implemented by using PI regulators and three-level inverter. Then an improved predictive torque control is developed and performed with two-level inverter. In the proposed predictive control the next torque and flux are predicted by discrete model of motor and inverter. Afterward the feasible switching states are examined in a cost function. The switching state that minimizes the cost function has to be exerted during the portion of control interval in order to minimize the torque ripples. The method of active time calculation for reducing the torque ripples is presented. The torque response of the proposed predictive method is simulated and investigated in two different conditions. The results are compared with the torque response of the simulated DTC-SVM for three-level inverter.

کلمات کلیدی:

لینک ثابت مقاله در پایگاه سیویلیکا:

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