

عنوان مقاله:

Sensorless Speed Control of Induction Motors with DTC Based on EKF

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خلاصه مقاله:

Considering the wide usage of induction motors in various industries and the limitation of applying speed sensors in some cases, sensorless drives have become very important and the challenge to increase the accuracy of estimation continues. This paper presents a novel method for sensorless speed control for IM's that not only improve the estimation and speed tracking in DTC but also eliminate the speed sensor in DTC. For this purpose all needed parameters for sensorless speed control such as stator flux, speed and load torque are estimated with the extended Kalman filter. In this method, noise due to system structure, voltage, and current sampling is eliminated in all the effective parameters. Simulation results show the increase in the precision of estimation and speed tracking.

کلمات کلیدی:

Extended Kalman Filter, en, induction motor, Observer, Sensorless control

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