chapter 4 direct torque control and sensor less control of

#direct torque control #sensorless control #motor control systems #DTC #electric drive control

Explore the fundamental principles and advanced techniques of Direct Torque Control (DTC) in this comprehensive chapter. Delve into the intricacies of sensorless motor control, understanding how to achieve robust and efficient electric drive control without the need for physical speed or position sensors. This section provides critical insights into optimizing motor control systems for various industrial and automotive applications.

Direct Torque Control and Sensor-Less ...

by M Ahmad · 2010 — The application of vector control method for variable speed induction motor drives has been described in chapter 3. Generally, a closed loop vector control ...

A review of direct torque control of induction motors for ...

by T Sutikno · 2014 · Cited by 141 — Section 4 studies some improvements to the basic DTC. Section 5 ... Sensorless direct torque control technique for permanent magnet synchronous motors.

Direct Torque Control System and Sensorless Technique ...

PDF | The direct torque control theory has achieved great success in the control of induction motors. However, in the DTC drive system of Permanent.

Sensorless direct torque control based on seven-level ...

by A B1çak · 2021 · Cited by 21 — This paper proposes sensorless control of the seven-level torque hysteresis controller (7LTHC) in the direct torque control (DTC) method for five-phase ...

4 Vector and direct torque control of induction machines

31 Oct 2023 — This is especially the case at lower power levels, where on the rotor there is a squirrel-cage winding, which is manufactured by die-casting.

CHAPTER 2. DIRECT TORQUE CONTROL. PRINCIPLES ...

Torque is obtained using equation 1.82. 2.2.3.2 - Stator flux and torque estimator using Vdc, isA and isB magnitudes. In case that sensor-less direct torque ...

Sensorless fuzzy direct torque control of induction motor ...

by S El Daoudi · 2021 · Cited by 32 — In this work, a fuzzy direct torque control (DTC) is developed for asynchronous motor drive powered by two-level inverter. The main objective is to enhance the ...

quick dynamic torque control in dtc-hysteresis-based ...

by MD Kulkarni · Cited by 3 — In this pretext, Direct Torque Control (DTC) was introduced to obtain quick and better dynamic torque response. The DTC scheme in its basic configuration ...

DTC A motor control technique for all seasons

technology called direct torque control (DTC). The method directly controls motor torque instead of trying to control the currents analogously to DC drives ...

Sensorless Vector and Direct Torque Control - Peter Vas

This book examines sensorless vector-controlled drives and direct torque controlled drives. It builds on the author's popular Vector Control of AC Drives and ...