

Overview of direct torque control of induction machines

Abstract

In order to develop the Direct Torque Control (DTC) strategy, it is necessary to construct a dynamic model of the induction machine. The induction machine model used for a high performance control systems must include all the dynamic effects that occur during the transient states. For simplicity, a few assumptions and conventions are adopted [1][2][3]. Despite the simplification, the model adopted here is adequate for the design of a control system and is valid for any arbitrary time variation of the machine voltages and currents.