

DESIGN OF DYNAMIC BRAKING 1 PHASE INDUCTION MOTOR

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Abstract

If the electric motor during operation is removed from its voltage source, the motor does not stop immediately, but it still rotates due to the kinetic energy from the rotor and motor load, so it takes some time for the motor to stop. This will cause a waste of time. Therefore, an effort is needed to make the motorbike stop quickly, namely by braking. One approach used to improve energy efficiency during braking is to make the motor magnetic field stationary. This situation is carried out by injecting direct current into the stator coil of a 1-phase induction motor after the stator coil connection is removed from the source of the alternating current supply voltage. The purpose of this study is to determine the effect of the magnitude of the resulting braking power on the length of time to stop the tested motor with an injection voltage ranging from 1 volt to 25 volts with the duration of injection time ranging from 1 second to 3 seconds.

Keywords: Braking, Dinamic, Induction Motor.