

STEADY OF TRANSIENT AND STEADY STATE PERFORMANCE OF THREE PHASE WOUND ROTOR INDUCTION MOTOR WITH ROTOR RESISTANCE CONTROL

Abstract

To study the transient and steady state performance of three phase wound rotor induction motor with rotor resistance control with rectifier.

- (a) To record stator and rotor voltage and current waveform and their THD of a 3 phase induction motor and of ac mains at different rotor resistance using rectifier on rotor circuit with single resistance.
- (b) To record rms voltage, rms current, power factor, power and THD of voltage and current of a 3 phase induction motor and of ac mains at two different rotor resistance under different loads and plot (i) Speed vs torque (ii) Supply current vs torque (iii) Stator current vs Torque, (iv) Supply power factor vs Torque, (v) Efficiency vs Torque curves at two speeds.
- (c) To compute above mentioned curves of the three phase induction motor at various voltages.
- (d) To compute the starting torque and stator current for (i) Rated voltage and frequency at different rotor resistance.