Simulasi unjuk kerja motor induksi dengan catu PWM inverter = Induction motor performance simulation fed by pwm inverter

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Abstrak

Induction motors are broadly used recently. To work according to users requirements, power electronic equipments, like a PWM inverter, are used in controlling and expanding the working range of induction motors. Controlling induction motors using a PWM inverter is done by managing voltages and input frequencies to the induction motors stator. In this bachelor's thesis, the characteristics of an induction motor fed by a PWM inverter is simulated using SIMULINK programs of MATLAB 7.1.0.246 (R14) version. Most of the parameters used in modeling the system are adjusted using TecQuipment NE 7021 AC machine Console equipment at the Electric Energy Conversion Laboratory. The induction motor is a squirrel cage type and simulation is done by varying stator input frequency values and also modulation indexes, thereby achieving electromagnetic torque values and rotor spin speeds of the induction motor. The results of these simulations will be analyzed to know the influence of input voltage frequency and amplitude on the electromagnetic torque and rotor turn speed values.