DESIGN AND SIMULATION OF SVPWM TWO LEVEL INVERTER FOR THREE PHASE INDUCTION MOTOR

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ABSTRACT

Vector control most widely used for speed control of three phase induction motor because of flux and torque can control independently so that control speed of induction motor can more accurate. This final project is describe about space vector pulse width modulation (SVPWM) two level inverter as one of the methods pulse width Modulation (PWM) that connects between the vectors of the PWM that used for amplitude and frequency control. During this time, two-level SVPWM inverter is limited to the mathematical equation since it was made two level SVPWM inverter simulation.

The research start with the determination of the sector voltage and the determination of the duration of the vectors that affect each sector, determine the time at each switching transistor, and then began designing two-level simulation of SVPWM inverter. After the results of the response open loop two-level SVPWM inverter in three-phase induction motor response compared with the sinusoidal pulse width modulation (SPWM). The results obtained are not appropriate because of THD value SPWM still better than two-level SVPWM inverter.

Keywords : two level SVPWM inverter, SPWM, inverter
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