

RESEARCH ON NEUTRAL-POINT BALANCING FOR THREE-LEVEL INVERTER

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Abstract

This paper introduces the basic theory and a space vector pulse width modulation (SVPWM) method of the three-level inverter. The neutral-point potential balancing control is realized by rearranging the time distribution of redundant small voltage vectors, which requires measurements of only the direction of neutral-point current and capacitor voltages. Simulation results verify that the proposed SVPWM method is effective.

Keywords: Three-level inverter; Neutral-point potential balancing control; SVPWM