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Comparative Analysis of SVPWM and the Standard PWM Technique for Three Level Diode Clamped Inverter fed Induction Motor

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Abstract : The multi-level inverters present an important novelty in the field of energy control with high voltage and power. The major advantage of all multi-level inverters is the improvement and spectral quality of its generated output signals. In recent years, various pulse width modulation techniques have been developed. From these technics we have: Sinusoidal Pulse Width Modulation (SPWM) and Space Vector Pulse Width Modulation (SVPWM). This work presents a detailed analysis of the comparative advantage of space vector pulse width modulation (SVPWM) and the standard SPWM technique for Three Level Diode Clamped Inverter fed Induction Motor. The comparison is based on the evaluation of harmonic distortion THD.

Keywords: induction motor, multilevel inverters, SVPWM, SPWM, THD

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