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ANALYSIS AND SYNTHESIS OF SYMMETRICAL OUTPUT VOLTAGE OF THREE-LEVEL CONVERTERS WITH SPACE-VECTOR PWM

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Abstract

Modulation processes have been analyzed in three-level H-bridge converter with low switching frequency. It has been shown, that the use of special switching strategy combined with specific technique of PWM allows insuring of quarter-wave symmetry of the output voltage waveforms of converters during entire adjustment range. Investigation of harmonic composition of spectra of the output voltage of converter has been executed. Averaged integral spectral characteristics of the output voltage have been determined for converters with low switching frequency and with three basic versions of pulsewidth modulation. References 6, figures 4.

Key words: cascaded converter, switching strategy, spectra and harmonics.

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