

OPTIMIZED HARMONIC STEPPED-WAVEFORM FOR MULTILEVEL INVERTER

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(ABSTRACT)

The concept of multilevel voltage source inverters and their modulation topologies are described. The concept of the Optimized Harmonic Stepped-Waveform (OHSW) technique for a multilevel inverter is presented. By applying this concept, specific harmonics can be eliminated, and the output voltage THD can be improved. A procedure to achieve the appropriate switching angles of the OHSW is proposed. Experimental results are presented to verify the concept. The proposed OHSW technique is implemented on a multilevel inverter using cascaded-inverter with separated dc sources. Comparison between the Selective Harmonic Eliminated PWM and the OHSW is also presented.

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