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ADJACENT POSSIBLE SWITCHING DIODE CLAMPED MULTI IEVEL INVERTER WITH SINGLE CARRIER SINUSOIDAL PWM

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Abstract

This paper presents adjacent possible switching diode clamped multilevel inverter in which the adjacent possible switching technique is used in DCMI to increase the number of levels than in a conventional DCMI. This paper is focused on minimizing the number of power capacitors and semiconductors for a given number of levels. Single carrier sinusoidal modulation (SC-SPWM) technique used in ADCMI to provides the variable voltage and a variable frequency supply. The proposed switching technique generates lower total harmonic distortion (THD). The effectiveness of the system is verified through simulation using MATLAB/Simulink.

Keywords : Adjacent possible switching DCMI (ADCMI), Single carrier sinusoidal pulse width modulation (SC-SPWM), Total harmonic Distortion(THD)