Abstract

A new scheme of Multi Carrier Pulse Width Modulation (MCPWM) method for the control of a three-level inverter is proposed. Multi Carrier Pulse Width Modulation (MCPWM) works with a constant carrier frequency not synchronized with fundamental stator frequency. MCPWM gives an optimal utilization of switching frequency permitted, therefore PWM carrier frequency may be chosen to a value of two times the permitted switching frequency. Many applications of three-level inverters work with a dc-link neutral point not stabilized from the power input converter. A flying capacitor multi level inverter is described, which is capable of stabilizing potential by varying the switching sequences of the three-level inverter itself. Results from MATLAB simulation show the good performance of MCPWM.

Reference

[2] B. Gotas, B. Knafél, P. Knapp, A. Rufer, Stromrichterschaltung und Verfahren zu dessen Steuerung Europilische Patentschrift 0 25491 1 B 1 06.07.87

Index Terms

Power Electronics
Control Systems

Key words
Multi level inverter
Multi carrier PWM