Novel Hybrid Flying-Capacitor-Half-Bridge 9-Level Inverter

This paper proposed a novel hybrid flying-capacitor-half-bridge 9-level inverter in which flying-capacitor-half-bridge 5-level inverter and an H-bridge inverter with equal dc bus voltage are series connected to form an inverter phase leg. A new hybrid FCH control technique for the novel inverter is proposed. Spectral analysis of output waveform is carried out. The proposed converter is also verified by simulation using MATLAB-Simulink. Simulation results are also presented in this paper.