

عنوان مقاله:

An Advanced Modular Multilevel Current Source Inverter with Minimum number of Circuit Devices

محل انتشار:

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خلاصه مقاله:

In this paper, a novel multilevel current source inverter is investigated. It can be employed in low/medium power applications. The proposed inverter can generate all the current steps in the output with both positive and negative polarities. In multilevel current source structures, the number of required circuit devices is an essential factor, because the overall costs, circuit size, reliability and the control complexity are dependent of them directly. Provided comparisons show the superiority of the proposed inverter versus the conventional multilevel current source inverter. In this proposed inverter, desired output current levels are generated by the lower number of circuit devices including power semi-conductor switches and related gate driver circuits of switches. So, it can reduce the total costs and installation area, and make the control scheme simpler. Also, it improves the reliability of the overall system as well. Simulation results are provided to show the feasibility and effectiveness of the proposed inverter

کلمات کلیدی:

Multilevel Current Source Inverters, Symmetric Inverter, Reduction of Circuit Components

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