

عنوان مقاله:

Comparison of 2.3kV Neutral Point Clamped, Series Connected H-Bridge and Auxiliary Series Connected H-Bridge Five-Level Converters

محل انتشار:

دومین کنفرانس بین المللی الکترونیک قدرت و سیستم های درایو (سال: 1389)

تعداد صفحات اصل مقاله: 6

نویسندگان:

mehdi niakinezhad - *Iran University of Science and Technology Tehran, Iran*

mohammad ali akbari baseri - *Iran University of Science and Technology Tehran, Iran*

seyed saeed fazel - *Iran University of Science and Technology Tehran, Iran*

خلاصه مقاله:

This paper compares a Five-Level Neutral Point Clamped Voltage Source Converter (5L-NPC VSC), a Five-Level Series Connected H-Bridge Voltage Source Converter (5L-SCHB VSC), and a new Five-Level Auxiliary Series Connected HBridge Voltage Source Converter (5L-ASCHB VSC) on the basis of the state-of-the-art 3.3kV, and 1.7kV IGBTs for a 2.3kV Medium Voltage Converter (MVC). To derive specific converter characteristics of the aforementioned topologies the power semiconductors utilization, the installed switch power, converter losses, the semiconductor loss distribution, efficiency, and the harmonic spectra are discussed in detail. Matlab/Simulink is used as a simulation tool for analysis and comparison.

کلمات کلیدی:

Five-level Converters, Medium Voltage Drives, Power Electronics

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