Inverter parallel high-frequency circulating current

Overview

Circulating current suppression can effectively improve the reliability and redundancy of parallel inverter systems. The mechanism and influencing factors of the low- and high-frequency zero-sequence circulating current (ZSCC) are analyzed in this study. However, when the inverters share a common DC source and AC bus, a circulating current is generated, which causes output current distortion and system power losses. Based on a mechanism analysis and the built.

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[Research on current sharing control of parallel inverters used on]

In order to suppress circulating currents, this paper provides a detailed analysis from both high-frequency and low-frequency perspectives in CPS-SPWM control mode.

[Research on Circulating Current Suppression Control of Parallel Inverters]

Circulating current suppression can effectively improve the reliability and redundancy of parallel inverter systems. The mechanism and influencing factors of the low- and high-frequency zero ...

[APEC_Full_Circulating harmonics_rev2_Jiahao_Niu_2019]

Abstract--In paralleled voltage source inverters (VSI), circulating current has both high frequency and low frequency components, and its spectrum highly depends on the modulation scheme. Previous ...

[Carrier Phase Synchronization Based on Circulating Current]

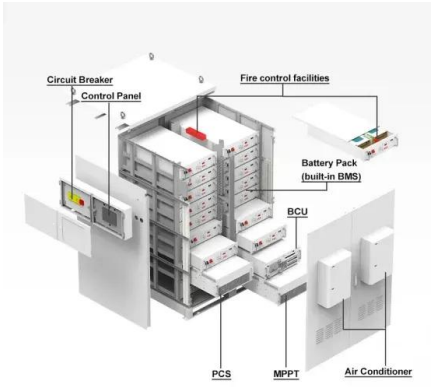
In the proposed scheme, circulating currents in parallel inverters directly influence high-frequency harmonics and carry carrier phase information. The peak amplitude of these currents is used to ...

[Review of Methods for Reducing Circulating Currents in Parallel]

Carrier synchronization is the representative method for reducing the high-frequency circulating current when the carrier waves of each inverter are diferent. The carriers are synchronized using the ...

[Reduction of the Circulating Current Among Parallel NPC Inverters]

Abstract: In medium/high power applications, including smart transformers, active power filters, and wind turbines, three-level neutral-point-clamped (NPC) inverters proved to be a reliable solution, providing ...



[Integrated paralleling of NPC inverters with suppressed circulating]

In interleaved paralleling, the circulating current is primarily a high-frequency component caused by the carrier difference, which cannot be suppressed or eliminated by adjusting the zero ...

[A Software Synchronization Method for High-Frequency Circulating]

Abstract: To increase system power, multiple inverters are connected in parallel. However, if multiple inverters are connected in parallel but without carrier synchronization, it is possible to generate both ...

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