Inverter current sharing DC circulating current

Overview

This paper presents a distributed current control strategy for parallel-connected inverters driving a surface-mounted permanent-magnet synchronous machine with small sharing inductors. 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. These harmonic components of circulating current influence the inverter life cycle, and it can limit the power rating of the total. rrent suppression method for parallel operation of three-phase voltage source inverters (VSI), which may be suitable for modular parallel uninterruptible power supply systems or h brid AC/DC microgrid applications.

Inverter current sharing DC circulating current

[Distributed coordination control for suppressing ...]

To improve the robustness of consensus algorithm, the authors ...

[Elimination of circulating current in parallel operation of single]

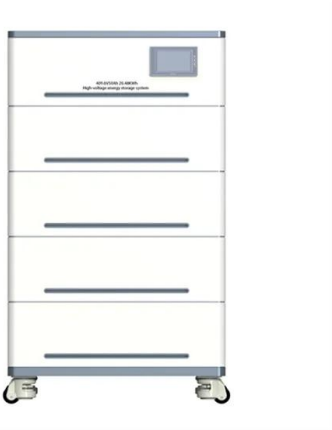
Abstract This paper presents the control strategy for parallel operation of an inverter to eliminate DC & AC circulating current.

[Distributed coordination control for suppressing circulating current in]

To improve the robustness of consensus algorithm, the authors take a relative value instead of absolute value from the primary control as the consensus variable to achieve accurate ...

[Advanced Control Strategy to Compensate Power Sharing Error and ...]

This paper proposes an advanced control strategy to eliminate both current sharing error and DC circulating current caused by line impedance mismatched and measurement errors in ...

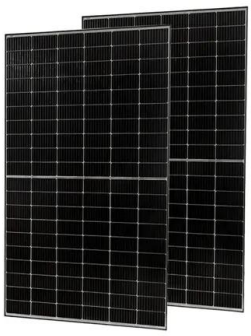


[Aalborg Universitet A Circulating-Current Suppression Method for]

brid AC/DC microgrid applications. The basic concept of the proposed circulating-current suppression method is to modify the original current references by using the current differenc.

[Circulating Current Control with Loss Reduction for Parallel Connected]

Connecting inverters in parallel is a common method for increasing current capacity. Due to the difference in the delay time and on-voltage of the gate circuit.



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

In order to suppress circulating currents, this paper proposes a circulating current suppression method that combines hardware and software systems, adopting a cascaded coupled ...

[Current control strategy for parallel-connected inverters to drive an]

Abstract This paper presents a distributed current control strategy for parallel-connected inverters driving a surface-mounted permanent-magnet synchronous machine with small sharing ...

[Review of Methods for Reducing Circulating Currents in Parallel]

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.

[A new adaptive instantaneous average current sharing technique for]

This paper proposes a new adaptive instantaneous average current sharing technique for load current sharing and minimizing circulating current among parallel-connected converters in a LV ...

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