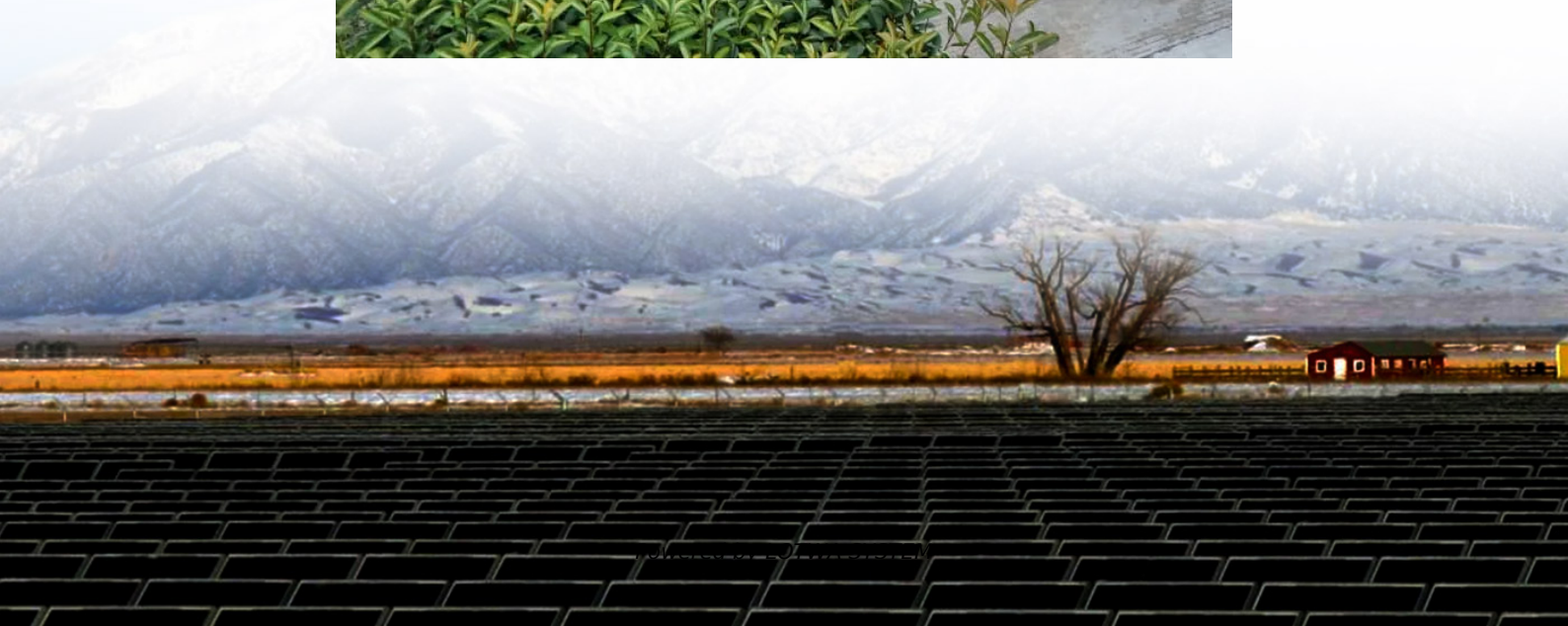


Bridge arm of voltage source inverter





Overview

Can a multilevel voltage source inverter based on H-bridge cells be used?

In this context, this paper focuses on the analysis, design and experimental validation of a multilevel voltage source inverter (VSI) scheme based on H-bridge cells with a modular and scalable structure for its application in power electronic converter circuits.

What are two-level three-phase voltage source inverters?

Two-level three-phase voltage source inverters often apply two control methods: sinusoidal pulse width modulation (SPWM) and space vector pulse width modulation (SVPWM). The SVPWM owns a higher utilization rate of DC voltage and does not require triangular carriers, allowing it to be broadly employed 4, 5, 6.

Why are reconstructed topologies of inverters with different bridge arm faults different?

The reconstructed topologies of inverters with different bridge arm faults are different, which makes the basic voltage vector phase of each reconstructed topology inconsistent, resulting in different calculations.

Are two-level three-phase voltage source inverters fault-tolerant?

The fault-tolerant control of two-level three-phase voltage source inverters has been extensively studied 1, 2, 3, including two reconstruction aspects: hardware topology and software control strategy. Various fault-tolerant reconfiguration topologies of three-phase voltage source inverters have been summarized in Refs. 1, 2, 3.



Bridge arm of voltage source inverter

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