Inverter DC Voltage Utilization

A new type of DC-AC inverter structure was proposed in (Farhadi and Abapour, 2019), which is capable of operating with a wide range of DC input voltages by appropriately altering the ...

In this paper, a modified method named reconstructed carrier quasi-trapezoidal pulse width modulation (RC-qTPWM) is proposed to improve the DC voltage utilization ratio, decrease the line voltage total ...

This paper proposes a new hybrid nine-level inverter topology with ...

A new algorithm is presented in this study to balance the power between the inverter stages. This is important to increase the lifetime of the PV ...

SPWM features a relatively simple modulation strategy but has low voltage utilization, whereas SVPWM, despite its complex modulation strategy, can utilize the DC supply voltage more efficiently, boasting ...

This paper describes a new five-level inverter with a switched capacitor design that aims to address these issues by maximizing the utilization of the DC bus voltage while reducing the component count.

This result shows that we can improve the voltage spectrum and the DC bus utilization by adjusting the DC bus voltage to work with high modulation index and improve conversion quality.

The proposed inverter is capable of operating with a wide range of output voltages from zero to the full value of the dc input voltage by appropriately altering instantaneous duty-cycle.

The simulation results show that the SHEPWM control method has the characteristics of high DC voltage utilization and small voltage and current harmonic content compared with SPWM ...

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