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## **Circulating Harmonic Currents Suppression of Level-Increased NLM Based Modular Multilevel Converter With Deadbeat Control**

a circulating harmonic currents suppression method is proposed by applying deadbeat control for the MMC with level-increased NLM. Compared with the existing direct circulating current control approaches for the MMC, the proposed method presents specific extension and adjustment principle of the total inserted SM number. Therefore, the proposed method can improve the dynamic control performance and handle large circulating harmonic currents at steady state. &nbsp;&nbsp;&nbsp;And it can well coordinate the modulation and circulating harmonic currents suppression stages to avoid disturbing the ac-side output voltage while regulating the circulating current. The effectiveness of the proposed method is evaluated by a single-phase industrial-level simulated MMC system

**Domain:** Power Electronics / Multilevel Converters

**Technology:** Electrical