

## عنوان مقاله:

Assessment of Two Modulation Techniques Used in Active Power Filters

## محل انتشار:

شانزدهمین کنفرانس دانشجویی مهندسی برق ایران (سال: 1392)

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## خلاصه مقاله:

One of the effective factors in performance of Active Power Filter (APF) is its modulation technique. In this paper, two modulation techniques namely, the Hysteresis current Control Pulse Width Modulation (HCC PWM) and Carrier-based Pulse Width Modulation (CPWM), are analyzed for a shunt APF. The shunt APF is implemented with a Two-Level Voltage Source Inverter (2L-VSI) and Three-Level Neutral Point Clamped Voltage Source Inverter (3L-NPC VSI). The reference signals extraction technique is based on instantaneous reactive power theory (p-q theory) in order to eliminate harmonic components and compensate reactive power. Impressive parameters in switching frequency are designed carefully to achieve the same switching frequency for all the case studies. The analysis is based on respecting the same maximum switching frequency and results are compared through Total Harmonic Distortion (THD) value of source currents, dynamic performance and switching numbers of IGBTs.

## کلمات کلیدی:

Shunt active power filter, Hysteresis current -control PWM, Carrier-based PWM, Switching frequency

## لینک ثابت مقاله در پایگاه سیویلیکا:

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