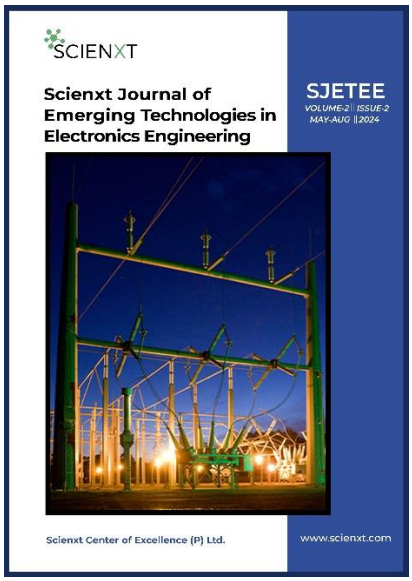


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# *'Harmonic deduction using single phase active power filters controlled by a hysteresis current controller devices'*

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## Abstract:

This article describes the use of power filters to apply negative feedback to one-time plans. Harmonics are produced when the PCC is connected to a nonlinear load. Single stage active power filter reduces harmonics. In order to prevent elect ronic products from being damaged by harmonic injection, electronic filters are used to suppress harmonics generated by nonuniform components. This unique si ngle-stage power filter uses a half-bridge with shared capacitors. To compensate for the harmonics in the field current, the generator usually uses parabolic pulse width modulation (PWM) to control the two power supply voltag es. Unlike parabolic PWM, the harmonic current is reduced using a hysteretic mechanism. Circuits of both controllers, including active filters and single- phase networks, are modeled in MATLAB Simulink and their time plans are created.

## Keywords:

Power factor enhancement; harmonics suppression; shunt active power filter; parabolic pulse width modulation.