MITIGATION OF HARMONIC IN NON-LINEAR LOAD USING PWM TECHNIQUES WITH SHUNT PASSIVE POWER FILTER

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ABSTRACT

This paper presents an analysis to mitigate harmonic in nonlinear load using three phase pulse width modulation (PWM) techniques with shunt active power filter. PWM signal and the voltage inverter are used with the shunt passive power filter (PPF) to reduce the value of total harmonic distortion (THD). The conduction mode angle of three phase PWM are varied form 20° to 180°. The advantages of PWM is the output voltage is nearly sinusoidal, better power factor and better transient response. The analysis is to observe that harmonic can be reduced comply with IEEE regulation standard. The simulation result was carried out using Matlab/Simulink R2012a.

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