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Abstract

Unbalanced and distorted source voltages will cause neutral current increase and phase currents become distorted. In this paper, a control method for series active power filter that implemented as voltage unbalance and distortion compensator is described. This control approach is based on detection input unbalanced and distorted voltages. By calculating positive sequence voltages, a new three phase balance voltages will be achieved, but they are still distorted. A low pass filter (LPF) is needed to filter out the unwanted contents. By subtracting these waveforms from the input voltages, the reference compensated waveform is obtained. Simulation is done to verify analysis.

Kata kunci : tapis daya aktif, nonlinier, PWM converter