

Investigating the ability of shunt hybrid power filter based on SRF method under non-ideal supply voltage

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ABSTRACT

This study presents the capacity of a self-tuning filter based on the synchronous reference frame method with a fuzzy logic controller for the improvement of the efficiency of harmonic suppression of a shunt hybrid active power filter in an unbalanced distorted and un-distorted voltage supply conditions. The simulation results indicated that the filter with a fuzzy logic controller had a good filtering performance in steady and transient states, irrespective of whether the voltage supply is distorted or unbalanced.

KEYWORDS:

Bandpass filters; Computer circuits; Fuzzy logic