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ADVANCED CONTROLLING SCHEMES FOR ACTIVE POWER FILTER UNDER VARYING LOAD: A REVIEW

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ABSTRACT

In this paper, we give the main focus on the continuous advancement in the field of power quality improvement. Development of artificial intelligence and expert system in the area of control engineering dragged the attention of researcher to incorporate these advance techniques with active power filter to enhance its compensation properties. Numerous control algorithms have been developed in last few years using AI techniques like fuzzy logic, artificial neural network (ANN) and genetic algorithm. Application of these techniques in the area of power quality shows great improvement in results in terms of reduction of % THD. The present work describes modelling and controlling technique of active power filter and presents the detailed review on advance control methodology for APF. This paper also presents the comparative analysis of performance of shunt active power filter with conventional and adaptive controller under varying load condition. A classified list of 25 publications on this topic is also given for the quick reference.

KEYWORDS: *Active Power Filter, AI Techniques, Adaptive Control, Total Harmonic Distortion*

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