Execution of Optimization Algorithm in Cascaded H-Bridge Multilevel Inverter

Authors : M. Suresh Kumar, K. Ramani

Abstract : This paper proposed the harmonic elimination of Cascaded H-Bridge Multi-Level Inverter by using Selective Harmonic Elimination-Pulse Width Modulation method programmed with Particle Swarm Optimization algorithm. PSO method determine proficiently the required switching angles to eliminate low order harmonics up to the 11th order from the inverter output voltage waveform while keeping the magnitude of the fundamental harmonics at the desired value. Results demonstrate that the proposed method does efficiently eliminate a great number of specific harmonics and the output voltage is resulted in minimum Total Harmonic Distortion. The results shown that the PSO algorithm attain successfully to the global solution faster than other algorithms.