Abstract

This paper presents series and compound compensators that will be added to the power system in order to enhance the voltage stability during the increasing in power demand. In order to get the optimal location, size and the minimum power loss of these compensators a comparative study is made between the two types based on normal PSO and weighted PSO optimization methods. The proposed algorithm is applied on IEEE 30-bus test system and the simulations have been made in MATLAB R2013a software environment. The results show that the system performance is better with WPSO than PSO.

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\textbf{Index Terms}

Computer Science

Algorithms
Keywords
- Power flow
- standard PSO
- WPSO