Chemical Reaction based Optimal Reactive Power Flow

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Abstract

The optimal reactive power flow (ORPF) helps to effectively utilize the existing reactive power sources for minimizing the network loss. The chemical reaction optimization (CRO), inspired from the interactions of molecules in a chemical reaction to reach a low energy stable state and searches for optimal solution through reactions involving the on-wall ineffective collisions, decomposition, inter-molecular ineffective collision and synthesis. This paper attempts to obtain global best solution of ORPF using CRO. The results of IEEE 30 bus system are presented to demonstrate its performance.

References

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