Optimal Reactive Power Compensation in Electrical Distribution Networks*

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Abstract

Reactive power compensation in distribution networks is one of the most important economic and environmental issues in power system studies. In this paper the following points are investigated:

- **The characteristics of the most developed equipment used for reactive power compensation.**
- **Equations used in ETAP program calculation**
- **OCP is part of ETAP program which gives us the possibility to determine optimal reactive power sizing and placement in distribution networks in order to achieve optimal Power loss and distribution power system enhancement.**
- **ETAP program is applied on a part of Damascus suburb electrical network which was simulated by its real parameters and the positive economical and technical results have been clarified.**

Keywords: SVC, OPTIMIZATION, GENETIC ALGORITHM, ETAP 6.0,REACTIVE POWER COPENSATION

* For The paper in Arabic see pages (243-256)

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