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## LOAD FLOW ANALYSIS IN AN INTERCONNECTED SYSTEM WITH OPTIMAL SHUNT COMPENSATION

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## Abstract

This paper determines the optimal location of a shunt compensator and its control to improve voltage profile and power system loadability under steady state condition. A program is developed in MATLAB platform to find the optimal location and amount of reactive power support by carrying out load flow analysis to enhance the ability of the system to feed increasing power demand, maintaining the voltage within limits in addition to avoiding overloading of the transmission lines. The validity of the program is tested on a five bus system and results obtained are presented in this paper.

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Keywords : Newton-Raphson load flow, Shunt compensation, power system loadability.

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