PERFORMANCE ANALYSIS OF D-STATCOM COMPENSATOR USING CONTROL TECHNIQUES FOR LOAD COMPENSATION

Mr.Ch. VENKATA KRISHNA REDDY, Dr. K.KRISHNA VENI, Dr.G.TULASIRAM DAS and Dr. SAMPATH.PULLA

ABSTRACT

The majority of power consumption has been drawn in reactive loads, these excessive reactive power demand increases feeder losses and reduces the active power flow capability of distribution system where as unbalancing affects the operation of transformers and generators. DSTATCOM can be used for the compensation of reactive power and unbalance loading in distribution system. The performance of the DSTATCOM depends on the control algorithm i.e. the extraction of the current components. In this project DSTATCOM is controlled by IRP and SRF theory for compensation of reactive power and unbalance and these methods are compared with a new Adaline based algorithm. Adaline based control algorithm An Adaline based control technique has resulted inconsiderable improved performance of DSTATCOM.

INDEX TERMS — DSTATCOM, Extraction of current components, Reactive power, Control algorithms, Matlab.