



Optimal Sizing and Siting of High Voltage Shunt Reactors in 220kv Transmission Line System

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Abstract—The main purpose of our project is to make a shunt reactors variable, and this is a case study from Daddu to Khuzdar. which can permit customers to constantly modify the compensation, as loads fluctuate over time. They make switching in and out of fixed-rating reactors unnecessary, which eliminates hazardous voltage steps. The variable reactor can usually be adapted to the need, both in present-day operation and in the future grid. Variable Shunt reactors are mounted to offset (balance) the capacitive impact (effect) of transmission lines and consequently improve the voltage profiles of transmission lines. In addition, they also assist adjust the volt/VAR of power systems. Specific implementations of VSR (variable shunt reactor) may also extensively differ between utilities. Reactors can be placed on an area of the transmission line or on the adjacent bus.

Keywords —Best sizing and siting of VSR, Arduino controlled, Fully Automated, Efficiency is High