ABSTRACT

The work in this thesis is on Stability of HVDC Segmented Power Grid Topologies. An HVAC Interconnected Network consists of different imperative components. During the generation of electrical power there are external disturbances. These disturbances cause the frequency variation that affect all the components of the power system. After a fault, the stability of a power system means to return to its stable state of operation. we make Grid/Zone segmentation of power system into three Zones and connect them with HVDC Links(CSC, VSC and CCC) by making different cases along with Ring and Radial Topologies and then apply Bus fault and Line fault on each zones and in each case, then check the stability in term of Bus Bar Frequency(pu) on all the buses in Power Network and compare the case results with HVAC Network and conclude that which case is best for power system stability. The simulation results show that VSC gives best result along with Ring Topology.