

Voltage Flicker Mitigation Using STATCOM and BESS

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The Voltage flicker, a phenomenon of annoying light intensity fluctuation, caused by rapid change in industrial and domestic load such as Electric Arc Furnaces (ESF), rolling mills, welding equipments and pumps operating periodically has been a major concern for supply utilities, electricity regulatory agencies and customers. Static Voltage Compensators (SVC's) and Static Synchronous Compensators (STATCOM) have been able to solve the voltage flicker problem by rapidly controlling the reactive power. But, the control of active power along with reactive power control helps to mitigate the voltage flicker problem more effectively. In this paper, voltage flicker mitigation of EAF with STATCOM along with Battery Energy Storage System (BESS) is presented and performance results of the system using PSCAD/EMTDC software are analyzed.



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