Purpose of Disconnect Switches In HV Substation

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Types and Characteristics //

Switches may be of several types, the common characteristic is that none are designed to interrupt fault currents and the insulation or insulators associated with them must coordinate with the rest of the system and a BIL (Basic insulation level) capable of withstanding voltage surges.

In general, they consist of a ***conducting blade***, hinged at one end, and a stationary contact on the other, both terminals mounted on suitable insulators that conform to the common insulator requirements of BIL coordination.

Almost every major line or equipment in a substation has associated with it a means of ***completely isolating*** it from other energized elements as a prudent means of insuring safety by preventing accidental energization. These simple switches, called ***disconnects***, or ***disconnecting switches***, are usually installed on both sides of the equipment or line upon which work is to be done.

They should not be operated while the circuit in which they are connected ***is energized***, ***but only after the circuit is deenergized***. As a further precaution, they may be opened by means of an insulated stick that helps the operator