

Critical review on the need for insulation coordination studies in Malaysia

ABSTRACT

Insulation coordination models are an essential part of power system studies and are used to determine the expected overhead line backflashover rate. This paper gives a general background of the insulation coordination and explains its importance. The need to perform lightning-strike studies for insulation coordination of high voltage lines is discussed in terms of the levels of interruptions / damage that result from such events. The paper explains the lightning overvoltage and gives the importance of lightning protection for transmission lines. The process of backflashover and methods in computing backflashover and shielding failures rates will also be discussed, particularly the comparison between the CIGRE and IEEE methods.

Keyword: Insulation coordination; Backflashover; Shielding failure; Lightning