

عنوان مقاله:

Analysis of Flashover Voltages of Disc Type Insulator under Artificial Pollution Condition

محل انتشار:

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خلاصه مقاله:

Tripping of overhead transmission lines in winter season/fog due to insulation failure has been foremost issue. Huge quantity of overhead insulator in distribution and transmission network make pollution based on flashover a vital risk to the uninterrupted and steady power supply. Surface resistivity due to deposition of various environmental contaminants on insulator surface gets low, which initiates flow of high leakage current and leads to flashover around the insulator surface. In this paper, flashover voltage (FOV) analysis of artificially polluted disc insulator carried out. Numerous kind of soluble and non-soluble and their mixture contaminants exist in industrial, marine and desert regions are modeled and insulator characteristics i.e. Equivalent Salt Deposit Density (ESDD), Non-soluble Deposit Density (NSDD), pH, Surface conductivity and ESDD/NSDD are analyze. By using FOV and ESDD characteristics, an empirical model is proposed to determine the flashover voltage. Comparative study of experimental and calculated values of FOV also carried out.

کلمات کلیدی:

Surface Conductivity Contaminants Equivalent Salt Deposit Density Flashover Voltage Non-soluble Deposit Density pH

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