ABSTRACT

Arrester is very important device in lightning protection. Modeling of arrester is necessary to analyze the arrester capabilities using by computer software. The final project is analyze the effect of stray capacitance that arises at 150 kV arrester on arresters performance. Stray capacitance arising obtained using Finite Element Methods (FEM) in IEC standard. Using these methods obtained the value of the stray capacitance on arrester is equal to 733.3 pF. The result of these calculation will be used to simulate the performance of the arresters.

There result simulation software using Electromagnetic Transient Program (EMTP) to show the stray capacitance effect on the speed arrester in reducing disruption. But the incident did not affect to the magnitude of residual stress generated, with the value obtained errors that occur due to stray capacitance of 350 kV lightning interference value between 0.006 % until 0.16%, while for the interruption of 500 kV lightning worth between 0.004 % until 0.08 %

Keyword : Lightning Arrester, Stray Capacitance, Finite Element Methods (FEM), Electromagnetic Transient Program (EMTP)
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