

عنوان مقاله:

Lightning Transients Analysis When Using Composite Cross-Arm in Distribution Networks

محل انتشار:

بیست و هشتمین کنفرانس بین المللی برق (سال: 1392)

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خلاصه مقاله:

One of the main phenomena having effect on various voltage levels in power systems is transient over voltages, specifically over voltages caused by lightning that strike the line. This type of overvoltage should be properly controlled, so that equipment would receive minimum damage. Currently, in 20 kV distribution networks, surge arrester is one of the protection equipment using against lightning striking the line. Recently, the idea of using composite cross-arms in the distribution networks has intensified, due to the many advantages that they own. Since, using composite in the cross-arm construction increases the insulating standing of the poles, this affair will bring up changes in the operation of the lightning arresters and insulators. This paper has studied this subject matter. The simulations have been carried out by EMTP-Work software. The results show that in terms of electrical, using composite in cross-arm construction increases the damage rate of distribution system in the lightning event

کلمات کلیدی:

EMTP-Work, Lightning, Arrester, Composite Cross-Arm, Distribution Network, Guard Wire

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