عنوان مقاله:

A Practical Method for Calculating the Reclosing Time in Long Lines with Reactors Case Study: Transmission Lines of Yazd Province

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خلاصه مقاله:

In transmission networks, the recloser is used to detect and interrupt transient faults, isolate faults, manage the network structure, and increase reliability. This instrument interrupts momentary faults by opening and closing its faulty downstream power system. An auto-reclose method can be used to trip the faulted line and re-energize it after an intentional time delay. This time delay is normally required for the de-energization of the fault arc otherwise the arc will restrike. One of the most important factors that should be considered in reclosing in long lines is the ability to turn off the secondary arc by means of Neutral grounding resistors (NGR) in the reactor neutral location. Due to many factors such as line length change, NGR design, etc., it is very important to determine the proper dead time. This paper presents an auto-reclosing study of ۴۰۰kV transmission lines. The success of auto-reclosing depends on the extinction of the secondary arc. In the proposed method, it is explained with some real examples of Yazd transmission network lines that NGR cannot be expected to completely suppress the secondary arc, so the maximum value of the secondary arc current and dead time will be calculated with the reverse calculation method.

کلمات کلیدی:

Reclosing, long lines, reactor, dead time, transient fault