

Effect of 132kV cross-country fault on distance protection system

Abstract

Towers with different voltage levels are now widely used transmission system. On this situation, it is probably that the faults that occurred will involve the two different voltage levels at the same time in a same tower. This paper presents the study of the effect of cross-country fault on distance protection. This study has been performed on a simple model circuit in transmission line. The cross-country fault analysis is more complicated than basic fault because it has to be considered fault locations simultaneously in the analysis. PSCAD/EMTDC software is used to perform the modeling and analysis of the effect of cross-country fault on distance protection. From simulation result, it can be identified the effect of cross-country fault on distance protection and the result can be compared with the basic fault analysis.