

New combined model of high impedance arcing fault in overhead transmission system

Abstract :

High impedance fault is a popular complex phenomenon that exhibits high nonlinear behavior. For most distinctive characteristics of high impedance fault, are asymmetry and nonlinearity, so, in order to obtain an accurate model of high impedance fault, it is necessary to develop a model that gives the most distinctive characteristics of high impedance fault. In this paper we propose a novel model of high impedance arcing fault in electrical power transmission system. Proposed model is based on the digital arc model incorporated with specially developed custom model which has been designed in PSCAD/EMTDC program. The results is clearly reveal that the proposed model gives the important characteristics of high impedance fault (HIF) which is essential for development of reliable detection algorithms.