عنوان مقاله:

Estimation of parameters of metal-oxide surge arrester models using Big Bang-Big Crunch and Hybrid Big Bang-Big Crunch algorithms

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خلاصه مقاله:

Metal oxide surge arrester accurate modeling and its parameter identification are very important for insulation coordination studies, arrester allocation and system reliability. Since quality and reliability of lightning performance studies can be improved with the more efficient representation of the arresters´ dynamic behavior. In this paper, Big Bang – Big Crunch and Hybrid Big Bang – Big Crunch optimization algorithms are used to selects optimum surge arrester model equivalent circuit parameters values, minimizing the error between the simulated peak residual voltage value and this given by the manufacturer.The proposed algorithms are applied to a 63 kV and 230 kV metal oxide .surge arrester. The obtained results show that using this method the maximum percentage error is below 1.5 percent

کلمات کلیدی:

Surge arresters, Residual voltage, Big Bang – Big Crunch algorithm, Hybrid Big Bang – Big Crunch algorithm