

66 kV配电网中性点经电阻接地的研究

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摘要

66 kV配电系统采用传统中性点接地方式时存在不足, 文章提出了在某市中心66 kV配电系统采用中性点经电阻接地的方式, 并综合考虑过电压、继电保护、通信干扰等因素, 利用Matlab仿真工具箱对采用该接线方式的配电系统进行了仿真分析, 确定了中性点的接地电阻值, 重点分析了中性点接地电阻值对弧光接地过电压的影响。结果表明, 采用上述接地方式能有效抑制弧光接地过电压、保证继电保护装置的选择性、提高保护装置动作的灵敏性, 具有一定的理论意义和工程实用价值。

关键词 [66 kV配电网](#); [中性点经电阻接地](#); [过电压](#)

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Research on Neutral Point Grounding via Resistance for 66 kV Distribution Network

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Abstract

Due to the defects of adopting traditional grounded neutral system in 66kV distribution network, in this paper it is proposed to adopt neutral point grounding via resistance for 66kV distribution network located in a certain city center, while the factors such as overvoltage, relay protection, communication interference and so on are comprehensively considered. By use of Matlab toolbox, a distribution system using this grounding mode is simulated and the value of grounding resistance at the neutral point is determined. The impact of neutral resistance value on arcing ground overvoltage is emphatically analyzed. Calculation results show the proposed grounding mode can effectively restrain the arcing ground overvoltage, ensure the selectivity of relay protection, enhance the action sensitivity of protection devices.

Key words [66 kV distribution system](#); [neutral point grounding via resistance](#); [overvoltage](#)

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