



提高广东架空送电线路输送容量研究

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摘要: 阐述架空导线载流控制条件, 分析广东架空送电线路实际运行条件和广东地区多年实测气象参数, 制定广东架空线路正常运行允许电流 I_0 , 通过风险分析证实现有线路正常载流能力可安全地提高7%以上。在正常允许电流 I_0 的基础上, 挖掘运行线路跨越距离裕度, 提出架空线路在检修、应急两种特殊运行条件下的允许电流 I_1 、 I_2 及其确定原则, 通过对实际线路开展测量和验算, 确认电网特殊情况下存在安全增容的可能性, 特定线路可以多输送容量30%~50%。

关键词: 架空线路; 输送容量; 环境温度; 跨越距离; 正常允许电流; 特殊允许电流

Study on Raising Transmission Capacity of Overhead Transmission Line in Guangdong Power Grid

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Abstract: The control condition of carrying capability of overhead transmission line is introduced, and a deep analysis is given on operation terms of transmission lines and weather parameters survey in decades in Guangdong, and allowable current I_0 on transmission line under normal operation for Guangdong Power Grid is established. It is approved by risk analysis that the transmission capacity can be raised 7% safely. Based on the normal allowable current I_0 , the paper studies the residual span distance of overhead transmission line, puts forward two allowable current I_1 , I_2 under overhauling and emergency conditions respectively, and their setup principle. The possibility of raising line transmission capacity 30%~50% is confirmed by surveying and checking computation of several operating lines.

Key words: overhead transmission line; transmission capacity; environment temperature; span distance; allowable current of natural operation; allowable current of special operation

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