

电力系统

多馈入交直流系统短路比影响因素分析

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摘要:

随着我国电网的发展, 我国南方电网和华东电网出现了多馈入交直流系统。多馈入短路比能够同时反映交流系统的强弱以及直流系统间的相互作用, 是构建多馈入直流系统的重要参考指标。通过理论分析深入研究了影响多馈入短路比变化的因素, 分析了直流落点间的电气距离(互阻抗)、网络结构, 包括网络拓扑、线路阻抗、电源分布等对多馈入短路比的影响, 给出了多馈入短路比的变化规律, 并通过两馈入直流系统验证了结论。

关键词: 多馈入短路比 电气距离 网络结构

Analysis of Influencing Factors of Short Circuit Ratio of Multi-Infed AC/DC Power Systems

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Abstract:

With the development of power grid, multi-infeed HVDC (MIDC) embedded in one AC system has emerged in south China power grid and east China power grid. Multi-infeed short circuit ratio(MSCR) can reflect the strong of the AC system and the interaction of HVDCs. It is the important criterion for MIDC system planning. The paper analyzed the influence factors of MSCR and proposed the effect of electrical distance and power grid construction, including network topology, line impedance and power source distribution. Finally, the conclusions are proved by two-infeed DC system.

Keywords: multi-infeed short circuit ratio (MSCR) electrical distance power grid construction

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