

交直流输电系统潮流计算中换流器运行方式的转换策略

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摘要

分析了多端直流输电系统和多馈入直流输电系统控制运行方式, 提出了采用计算机进行控制方式转换的方法。在考虑各种控制方式的控制作用和转换条件的基础上计算交直流系统潮流。该方法用加入2条直流输电线路的IEEE 300节点算例系统和加入三端直流输电系统的IEEE 118节点算例系统进行测试, 计算效果较好, 能够处理运行条件改变导致的运行方式发生的转换。

关键词 [电力系统](#); [交直流](#); [运行方式](#); [潮流计算](#)

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Transformation Strategy for Operation Mode of Converter in Power Flow Calculation of AC/DC Power Systems

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Abstract

After the analysis on control methods and operation modes for multi-terminal AC power transmission system, multi-terminal DC power transmission system and multi-infeed DC power transmission system, a computer based method to control operation modes for AC-MTDC (Multi-Terminal Direct Current) and AC-MIDC (Multi-Infeed Direct Current) system AC-MIDC (Multi-Infeed Direct Current) system is presented; and the strategy to transform the control methods is proposed. The power flows in AC/DC power grid are calculated on the basis of considering control actions of various control methods and transformation conditions. To test the presented method, the IEEE 300-bus system with two DC transmission lines added and the IEEE 118-bus system with a three-terminal DC transmission system added are adopted. The calculation results are satisfied, and it is proved that the operating mode transformation caused by the change of operating conditions can be settled by the presented method.

Key words [power system](#); [AC/DC](#); [operation mode](#); [power flow calculation](#)

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