



HVDC电压波动在线处理分析与实践

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摘要: 基于对贵广直流测量电压与故障传感器输入阻抗关系的分析, 提出电压波动在线处理的方法: 在系统运行且持续存在电压波动的情况下, 依次断开单个传感器的输入端, 将该传感器与系统隔离, 达到判断并更换故障传感器的目的而不会对系统产生大的影响。对这种在线处理对系统控制和保护可能产生的影响进行了评估, 并通过实时数字仿真 (RTDS) 加以验证。利用所提出的方法进行案例处理的结果说明了方法的有效性。

关键词: 直流输电; 电压波动; 直流测量; 实时数字仿真

Analysis and Practice of HVDC System's Voltage Fluctuation On-line Handling

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Abstract: Based on analysis of the relationship between DC voltage measurement of Guizhou-Guangdong HVDC system and the sensors' matching resistance, an on-line handling solution for voltage fluctuation of the HVDC system is presented as follows: While the system is running under voltage fluctuation, each single sensor could be disconnected and isolated to judge the fault sensors and replace them without serious impact to system operation. In addition, the possible impact is also evaluated to the control-protection functions of the HVDC system, and validated with RTDS. The successful treatment of a voltage fluctuation case with the suggested method testified its effectiveness.

Key words: HVDC; voltage fluctuation; DC measurement; RTDS

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