



天广直流输电系统控制策略改进建议
朱韬析¹, 欧开健², 王超³

摘要：基于天广直流输电系统基本控制策略以及用于控制的实际直流电流和实际直流电压的计算原理，分析了不正常的直流电流测量结果产生的负面影响。发现这种不正常性可能导致用在控制中的电流裕度等于逆变侧的直流电流测量误差，从而控制策略开关启动。建议将电流裕度设定为0.12 p.u.，以保证直流输电系统的安全稳定运行。这一改进措施经RTDS仿真得到了验证。

关键词：高压直流输电；定电流控制；直流电流测量异常；实时数字仿真器

Suggestions to Improve Control Strategy in Tianshengqiao-Guangzhou
HVDC Transmission System

ZHU Tao-xi¹, OU Kai-jian², WANG Chao³

Abstract: Based on the basic control strategy used in Tianshengqiao-Guangzhou HVDC transmission system and the calculational theory of actual DC current and DC voltage for control, the negative influence of abnormal DC current measurement is analyzed. It is found that this abnormality would cause the current margin used in control to be equal to the current measure error at inverter side, which would initiate the switch of control strategy. The result suggests that it is better for the current margin to be set to 0.12 p.u. to enhance the security and stability of the HVDC system, and this improvement measure is affirmed by RTDS.

Key words: HVDC; DC current control; abnormal measurement value of DC current; real time digital simulator

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