



交流系统故障导致直流线路保护动作的分析
余江, 周红阳, 黄佳胤, 王斌

摘要: 利用直流保护的数字式波形回放系统, 分析了2008年6月18日广东电网罗洞变电站发生500 kV电流互感器爆炸事故期间高坡站的直流线路行波保护和直流线路电压突变量的保护动作行为。按照直流保护动作原理和逻辑, 直流保护的动作为符合设计逻辑, 但违背了交流系统故障期间直流保护应可靠地不动作的设计规范, 并就直流线路电压突变量保护提出了改进方案。所提出的增加保护动作延时的措施已用于天广、高肇、兴安直流工程。

关键词: 电流互感器; 电压突变量保护; 行波保护; 谐波; 动作延时; 定值

Analysis on HVDC Line Protection Action due to AC System Fault

YU Jiang, ZHOU Hong-yang, HUANG Jia-yin, WANG Bin

Abstract: With digital fault record replayer of HVDC protection, the article analyzes the tripping of DC line voltage deviation protection in Gaopo Station of Guangdong Power Grid, which occurred due to the blast of 500 kV TA at Luodong Station on June 18, 2008, pointing out that in the situation $27du/dt$ worked in agreemnet with the protection logic, but this breached the crucial design principle that HVDC line protection function should not release during AC system faults. Certain measures for enhancing $27du/dt$ protection are presented, and the measure to increase time delay of $27du/dt$ has been adopted in the TSQ, GG1 and GGII projects.

Key words: current transformer; undervoltage sensing protection; wavefront protection; harmonic; time delay; threshold

[点击此处下载](#)

关闭窗口