

## 智能合闸控制器的原理及其在江陵换流站的应用

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摘要

对断路器的同步分合闸控制能够有效抑制分合闸时产生的暂态冲击。首先简介了ABB公司智能合闸控制器, 阐述了其内部工作原理。然后将智能合闸控制器投入江陵换流站, 即国家电网公司在500 kV超高压电网中首次采用同步分合闸技术限制过电压的现场试验情况进行了分析总结, 试验结果表明, 智能合闸装置对操作过电压的抑制效果明显。最后, 指出同类产品及技术在我国超高压及特高压电网中有广泛的应用前景。

关键词 [智能合闸控制器](#); [过电压](#); [断路器](#); [同步分合闸](#); [超高压电网](#)

分类号 [TM73](#); [TM56](#)

## Working Principle of Controlled Switcher with Artificial Intelligence Technology and Its Application in Jiangling Converter Station

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Abstract

The synchronous switching of circuit breakers can effectively reduce the transient impacts by switching on/off operation. In this paper at first the authors introduce the controlled switcher with artificial intelligence technology (CAT) manufactured by ABB company in brief and describe its working principle; then the on-site test, which is the first time in China to suppress over-voltage in 500 kV power grid by use of synchronous switching technology and CAT that is installed in Jiangling converter station, is summarized and analyzed. Test results show that CAT can evidently suppress switching overvoltage. Finally, it is pointed out that similar products and technology have wide application prospect in EHV and UHV power networks in China.

Key words [controlled switcher with artificial intelligence technology](#); [over-voltage](#); [circuit breaker](#); [synchronous switching](#); [EHV power network](#)

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