



特高压直流换流变压器试验标准和要求的探讨

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摘要：中国目前正在建设两个打破世界纪录的特高压直流输电工程，一是±800 kV云南—广东直流输电工程，二是±800 kV向家坝—上海直流输电工程。文章探讨了这两项直流输电工程的换流变压器在型式试验期间遇到的一些技术问题。该试验是按照客户基于相关的IEC标准提出的项目设备规范要求实施的，因此研究结果与相关的IEC标准及该试验的实际经验有关。基于这些研究成果，KEMA提出了对将来工程中换流变压器的试验要求的建议以及针对个别具体试验的改进措施。有一点要强调的，KEMA所推荐的变压器试验顺序值得遵循，因为在这一方面IEC标准是不明确的。

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关键词：换流变压器；标准；试验要求；±800 kV特高压直流输电

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Discussion on the Test Requirements and Standards for UHVDC Converter Transformers

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Abstract: This paper describes the issues encountered during type test of ± 800 kV UHVDC converter transformers for the first two UHVDC transmission record-breaking projects in the world, namely the Chinese ±800 kV Yunnan-Guangdong project and the ±800 kV Xiangjiaba-Shanghai project. The type test was carried out according to the test requirements as stated in client's project equipment specifications which are based on the relevant IEC standards, and thus the findings in this paper are related to the relevant IEC standards and the testing practice. Based on the findings KEMA gives recommendations for future test requirements of UHVDC converter transformers and the improvements for individual tests. It is emphasized however that the recommended testing sequence for converter transformers should always be followed as IEC is not clear on this aspect.

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Key words: converter transformer; standards; test requirements; ±800 kV UHVDC

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