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**Static var compensators (SVC) - System design and application
guidelines**

静止无功补偿装置 系统设计和应用导则

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Foreword

This instructional document has been drafted in accordance with the rules given in GB/T 1.1-2009. This guidance document is proposed by China Electrical Equipment Industry Association. This Guidance Document is organized by the National Committee of Technical Standardization of Power Electronics (SAC/TC60). The main drafting of this technical guidance document. Xi'an High Voltage Apparatus Research Institute Co., Ltd., China Southern Power Grid Research Institute limited liability Any company, Nanjing NARI insurance Electric Co., Ltd., Rongxin Power Electronics Co., Ltd., State Power Nanjing Automation Co., Ltd., Xi'an Polytechnic University, Xi'an Xixian Power Capacitor Co., Ltd., Southwest Power Design Institute Grid Branch, Xi'an Institute of Power Electronics Technology, State Grid Electric Power Research Institute, Kunming Electric Institute of Science and Technology, Xi'an Xikai High Voltage Electric Co., Ltd. Xu Ji Group Co., Ltd. Flexible Transmission company. The main drafters of this technical document are Sun Wei, Fu Chuang, Chen Chih-han, Zhang Fan-yong, Yang Xiaohui, Tian Enwen, Li Lu, Tong Xiangqian, Shin Jianwei, Wang Youlong, Yang Zhiyong, Zhang Huarong, Wei Hongqi, Zhu Zhenfei, Liang Shuaiqi, Zhou Qiongfang, Zhao Yongtao, Hu Xuhui, Meng Chen, He Qinglian. Static reactive power compensation device System Design and Application Guidelines

1 Scope

GB/Z 29630-2013 is the Chinese national standard on static var compensators (svc) - system design and application guidelines, in the field of electrical engineering. The /Z suffix marks it as a guiding technical document: it does not prescribe requirements that can be certified against, but sets out the technique, the method or the state of the art that the standards bodies recommend following. It was issued on 19 July 2013 by the State Administration for Market Regulation; Standardization Administration of China. As a guiding

technical document it carries no separate date of entry into force: it applies from publication. Classification: ICS 29.200, CCS K46. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This Guidance Document specifies the design of a static var compensation device (hereinafter referred to as SVC) to meet the operational requirements of the system. SVC components, subsystems, and layout, installation, and related design content set forth the basic requirements. This guidance document is applicable to the design of thyristor-based SVCs in transmission and distribution systems. This guidance is mainly for Thyristor Control Reactor (TCR) type and Thyristor Switched Capacitor (TSC) type SVC Thyristor Switching Reactor (TSR) SVC Refer to this instructional document for implementation. Each SVC project has its own particularity, and should be used according to the specific engineering conditions and requirements of the guidance of technical documents, if necessary, should be phase Should be added.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version applies to this article Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB 311.1 Insulation coordination Part 1. Definitions, principles and rules (GB 311.1-2012, IEC 60071-1.2006, MOD)

GB/T 1094.6 Power Transformer Part 6. Reactors (GB/T 1094.6-2011, IEC 60076-6.2007, MOD)

GB 1984 high-voltage AC circuit breakers (GB 1984-2003, IEC 62271-100.2001, MOD)

GB 1985 high-voltage AC isolation switch and earthing switch (GB 1985-2004, IEC 62271-102.2002, MOD)

GB/T 6451 oil-immersed power transformer technical parameters and requirements

GB/T 10228 dry-type power transformer technical parameters and requirements

GB/T 11024.1 Shunt capacitors for AC power systems with nominal voltages above 1000 V - Part 1. General (GB/T 11024.1-2010, IEC 60871-1.2005, MOD)

GB 11032 AC gapless metal oxide surge arresters (GB 11032-2010, IEC 60099-4.2006, MOD)

GB/T 12325 power quality power supply voltage deviation

GB/T 12326 power quality voltage fluctuations and flicker

GB/T 14285 relay protection and safety automatic device technical regulations

GB/T 14549 Power Quality Utility Harmonic

GB/T 14598.9 Measuring relays and protection equipment - Part 22-3 - Electrical disturbance tests Radiated electromagnetic field immunity (GB/T 14598.9-2010,

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