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**Technical specifications for oil-immersed smart power
transformers**

油浸式智能化电力变压器技术规范

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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. The guidance of technical documents by the National Standardization Technical Committee Transformer (SAC/TC44) centralized. The drafting of the guidance of technical documents. China Electric Power Research Institute, Shenyang Transformer Research Institute Co., Ltd., Shandong Electric Power Co., Ltd., Beijing Sifang Automation Co., Ltd., Shanghai Rui Kai Electric Co., Ltd., Xi'an XD Power Transformer Co., Ltd.

Secretary, Baoding Tianwei change Electric Co., TBEA Hengyang Transformer Co., Ltd., Dalian World Friends Power Technology Co., Ltd. The main drafters of this guidance document are Gao Fei, Zhang Xianzhong, Li Bo, Zhang Zhongguo, Liu Youwei, Zhao Xiaoyu, Li Jinzhong, Wang Xingang, Huang Xin, Wang Fu, Ying Ying, Cheng Congming, Zhang Yongxin, Deng Yan Guo, Xiao Yan, Tang Hao, Zhang Shuqi, Jia Pengfei, Yu Xinru, Wang Shiyu. Technical Specification for Oil - immersed Intelligent Power Transformer

1 Scope

GB/Z 34935-2017 is the Chinese national standard on technical specifications for oil-immersed smart power transformers, 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 1 November 2017 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 29.180, CCS K41. 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 defines the terms and definitions, general rules, configuration, testing, commissioning and acceptance of oil-immersed intelligent power transformers. The guidance of technical documents applicable to the system nominal voltage of 66kV ~ 750kV oil-immersed intelligent power transformers (hereinafter referred to as "Smart Transformer") design, manufacture, testing and selection. Other smart transformer design, manufacture, inspection and selection, etc. can refer to the implementation of this technical guidance.

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/T 1094.1 Power Transformers Part 1. General

GB/T 1094.2 Power transformers - Part 2. Temperature rise of liquid immersed transformers

GB/T 1094.3 Power Transformer Part 3. Insulation level, insulation test and external insulation air gap

GB/T 1094.4 Power Transformers Part 4. Lightning Impulse and Operating Shock Test Guidelines for Power Transformers and Reactors

GB/T 1094.7 Power transformers - Part 7. Load guidelines for oil - immersed power transformers Power transformers

GB/T 1094.10 Part 10. Determination of sound level

GB/T 2423.1 Environmental testing for electric and electronic products Part 2. Test methods Test A. Low temperature

GB/T 2423.2 Environmental testing for electric and electronic products Part 2. Test methods Test B. High temperature

GB/T 2423.4 Environmental testing for electric and electronic products Part 2. Test methods Test Db. Alternating hot and humid (12h 12h cycle)

GB/T 2900.95 Electrotechnical terminology transformers, voltage regulators and reactors

GB/T 4109 Insulation bushing with AC voltage higher than 1000V

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

GB/T 7252 transformer oil dissolved gas analysis and judgment guidelines