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NATIONAL STANDARD



OF THE PEOPLE'S REPUBLIC OF CHINA

中华人民共和国国家标准

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GBJ 148-90

**Code of Construction and Acceptance of Power
Transformer, Oil-immersed Transformer and Current
Transformer in Electrical Installation Engineering**
**电气装置安装工程电力变压器、油浸电抗器、互感器
施工及验收规范**

Issued on: December 30, 1990

Implemented on: October 1, 1991

Issued by: Ministry of Construction of the People's republic of China

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Chief Editorial Department: Previous Ministry of Water Conservancy and Electric
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NOTICE

This code is written in Chinese and English. The Chinese text shall be taken as the ruling one in the event of any inconsistency between the Chinese text and the English text.

Notice on Issuance of National Standard “Code of Construction and Acceptance of HV Electrical Apparatus in Electrical Installation Engineering” and Other Two Codes

(90) Jian Biao Zi No. 698

In accordance with the file Ji Zong No. [1986] 2630 issued by the previous State Planning Committee, the three codes revised and compiled by the previous Ministry of Water Conservancy and Electric Power have been reviewed by the concerned authority. Now it is approved that “Code of Construction and Acceptance of HV Electrical Apparatus in Electrical Installation Engineering” GBJ147-90, “Code of Construction and Acceptance of Power Transformer, Oil-immersed Transformer and Current Transformer in Electrical Installation Engineering” GBJ148-90 and “Code of Construction and Acceptance of Bus Bar in Electrical Installation Engineering” GBJ149-90 are national standards. They are put into execution on August 1, 1991.

The parts of HV electrical apparatus, power transformer and current transformer, and bus bar will be terminated at the same time.

The three codes are under administration of the Ministry of Energy Resources, and the Electrical Construction Research Institute of the ministry will be responsible for any explanations. The publication will be in the charge of the Standard and Norm Research Institute of the Ministry of Energy Resources.

**Ministry of Construction of the People's republic of China
December 30, 1990**

Notes on Revision

This code is compiled by the Electrical Construction Research Institute of the Ministry of Energy Resources jointly with the departments concerned and edited by the previous Ministry of Water Conservancy and Electric Power in accordance with the file Ji Zong No. (1986) 2630 issued by the previous State Planning Committee.

During revision and compilation, the task force made broad study and investigation, learned the experiences from execution of the previous code, absorbed some achievements in scientific research and widely asked for comments from the national departments concerned. The code is finalized by our ministry together with the departments concerned.

This code consists of 11 sections and 1 annex, the revised contents including:

1. According to the development of the electrical industry and actual situation in our country, contents related with the construction and acceptance of HV electrical apparatuses of 500 kV are added, so the application range of this Code is extended from 330 kV to 500 kV and lower.

2. Contents related to the HV electrical apparatuses used in the electrical installation engineering in recent years like vacuum breaker, SF₆ circuit breaker, SF₆ gas insulated switch (GIS), and metal oxide surge arrestor are added.

3. Different kinds of actuating units matched with various breakers are stated separately in the section "Actuating Units", to clarify the construction and acceptance requirement of each kind of actuating units.

4. Contents related to the main coil of dry reactor and line trap are added in the section "Reactors".

5. Partial revision and addition of other relevant items.

Should any incompleteness or incorrectness is found during application of this Code, comments and relevant information are kindly requested to send to the Electrical Construction Research Institute of the Ministry of Energy Resource (Liangxiang, Beijing, 102401) for reference for future revision.

Ministry of Energy Resource

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Ministry of Energy Resource

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1 General

1.0.1 This code is made for the purpose to guarantee installation quality of power transformers, oil-immersed reactors (hereinafter referred to as reactors), voltage transformers and current transformers (hereinafter referred to as transformers) in HV electrical construction. improve installation technology and ensure safe and reliable operation of the equipment

1.0.2 This code is applicable for construction and acceptance of installation engineering for power transformers, reactors, transformers of AC 500 kV and lower, 50 Hz.

For the installation of extinction coil, Section 2 of this Code can apply. The installation of special use transformers, reactors and transformers shall conform to the specification of the manufacturers and departments concerned.

1.0.3 The HV electrical apparatus shall be installed in the way that has been approved.

1.0.4 The equipment and material shall be transported and stored in compliance with this Code. In case that the product has special requirement, the special requirement shall be met.

1.0.5 Storage of equipment and material before installation shall be limited to 1 year or shorter. In case of long-term storage, special regulation for storage of equipment and material shall apply.

1.0.6 Equipment and material to be used shall conform to the applicable national technical standards, with qualified certificates and nameplates.

1.0.7 After equipment and material arrive at site, acceptance inspection shall be made timely as follows:

1.0.7.1 Package and sealing are good.

1.0.7.2 Open-box inspection, specifications meets the design requirement, accessories and spare parts are complete.

1.0.7.3 Technical documents of the product are complete.

1.0.7.4 Visual inspection shall be made as per this Code.

1.0.8 Safe technical measures used in the construction shall conform to this Code and relevant applicable safe technical standards and technical documents of the product.

1.0.9 Construction of buildings related to installation of power transformers, reactors and transformers shall meet the following requirements:



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