

ICS 29.180
CCS K 41



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 1094.6-2011

Replacing GB/T 10229-1988

Power transformers -- Part 6: Reactors

电力变压器 第6部分：电抗器

(English Translation)

Issued on: July 29, 2011

Implemented on: December 1, 2011

Issued by: Standardization Administration of China

Table of Contents

Introduction	
Introduction	
1 Scope	
2 Normative references	
3 Terms and definitions	
3.1 Reactor Type	
3.2 Other definitions	
4 Symbols and abbreviations	
5 Conditions	
5.1 Overview	
5.2 Earthquake Conditions	
6 Design, testing, and application of the deviation	
7 Shunt Reactor	
7.1 Overview	
7.2 Design	
7.3 Terms and Definitions	
7.4 9 ratings	
7.5 Temperature Rise	
7.6 Insulation level	
7.7 Nameplate	
7.8 Test	
7.9 Deviation	
8 Limiting reactors and neutral grounding reactor	
8.1 Overview	
19 8.2 Design	
20 8.3 Terms and Definitions	
8.4 21 ratings	
8.5 Rated to withstand thermal and mechanical short-circuit current short circuit current	
8.6 Temperature Rise	
8.7 Insulation level	
8.8 Nameplate	
8.9 Test	

Foreword

GB 1094 "Power Transformers" currently contains the following sections.

- Part 1. General;
- Part 2. temperature rise;
- Part 3. Insulation levels, dielectric tests and external insulation air gap;
- Part 4. Power transformers and reactors lightning impulse and switching impulse testing guidelines;
- Part 5. ability to withstand short circuit;
- Part 6. Reactors;
- Part 7. oil-immersed power transformer loading guidelines;
- Part 10. Determination of sound levels;
- Part 101. Determination of sound levels - Application guide;
- Part 11. Dry-type transformers.

This is Part 6 GB 1094 series of standards.

This section prepared in accordance with GB/T 1.1-2009 given rules.

Before this part of the standard version, code-named GB/T 10229, IEC standard code corresponding to IEC 60289. Since the relevant IEC power converter Pressure is now the standard code are adjusted to the IEC 60076 series, to be coordinated with the IEC standard code and easy to use, this revision will Standard code according to the new IEC standard series to be adjusted.

This Part replaces GB/T 10229-1988 "reactor." this portion of the GB/T 10229-1988 main changes are as follows.

- a) preparation of the format according to GB/T 1.1-2009 "Standardization Guide Part 1. Standard structure and drafting" and "Standardization Guide Part 2. The use of international standards" GB/T 20000.2-2009 provisions were modified;
- b) the standard name from the "reactor" to "Power transformers - Part 6. Reactors";
- c) increasing the normative references;
- d) expanding the scope of the reactor;
- e) increasing the provision of various types of reactors terms and definitions;
- f) increased the symbols and abbreviations;

- g) supplementary dry-type reactor conditions of use, increasing the use of other special conditions;
- h) increasing the design, testing, and application of bias;
- i) increase the discharge reactor and HVDC technology related content with smoothing reactor, and has all kinds of original standard Technical contents of the reactor were adjusted;
- j) of each chapter in the original standard "definition" to "Terms and Definitions";
- k) Added Appendix.

This section uses redrafted law revision using IEC 60076-6:2007 "Power transformers - Part 6. Reactors" (in English).

This section lists the reg number and in Appendix A 60076-6 IEC .2007 reg control list numbered.

Taking into account China's national conditions, in using IEC 60076-6:2007 when this part has made several modifications. About the technical differences have been incorporated into positive this paper identifies and vertical single line in which they are involved with the provisions margin. These technical differences are given in Appendix B and List the reasons for your reference.

This part of IEC 60076-6:2007 includes the following editorial changes.

- a) "this International Standard" be replaced by "this section";
- b) Remove the IEC 60076-6:2007 Foreword;
- c) use the decimal point. "" instead of a comma as the decimal point "." this part is proposed by the China Electrical Equipment Industrial Association.

This part of the National Standardization Technical Committee transformers (SAC/TC44) centralized.

This section is drafted. Shenyang Transformer Institute, SUNTEN Ltd., Beijing Power Equipment Plant, TBEA Shenyang Transformer Group Co., Ltd., Baoding Tianwei Electric Co., Ltd., Xi'an Electric Transformer Co., Ltd., State Grid Electric Power Research Institute, Guangzhou Panyu Pearl electrical limited liability company, Siyuan Electric Co., Ltd. The first branch, Ningbo Ning variable Electric Co., Baoding Bao Ling Transformer Co., Ltd., Guangdong Power Grid Power Research Institute, Guangzhou Zhiguang Electric Co., Ltd., TBEA Hengyang Transformer Co., Ltd, and Power Electric Group.

Introduction

The purpose of this section is to be within the range of the reactor to provide technical parameters and experimental basis. This section also should be certain reactor Used to

provide important information to help develop the technical specifications of the reactor.

This part as much as possible reference to GB 1094 in other parts of the section related to the power transformer. However, since the reactor and the pressure swing it is some essential difference, so they need some special consideration in the reactor specification, testing and applications. This section includes these consider.

Chapter 1 of this Part to Chapter 6 applies to all reactors, Chapter 7 to Chapter 12 corresponding to the different types of reactors. general , The chapter Chapter 7 to Chapter 12 corresponds to a class of reactors.

Terms defined in this section more than a general definition in Chapter 3 applies to the entire section, Chapter 7 to Chapter 12 of each chapter Regulation Given a certain type of reactor and its definition, and applies only to that chapter.

Chapter 7 to Chapter 12 have a unified structure. In this structure, the terms of the rating given reactor technical parameters provided by the user needs Basic Information. Test each chapter defines the terms used in this type of test reactor, and also includes a number of additional projects need to be negotiated when ordering.

Appendix C, Appendix D, Appendix E, Appendix F, Appendix H and Appendix I provides further a type reactors use and testing of letter

interest. Appendix G describes the room dry-type reactor turn overvoltage test.

This section includes the dry and liquid immersion-type reactor, when certain clauses apply only to a particular an electric reactor, also made a clarification.

Power transformers - Part 6. Reactors

1 Scope

GB 1094 This section applies to the following reactors.

- Shunt reactors;
- Series reactor, including limiting reactors, neutral grounding reactors, reactor power control, motor starter and arc reactor Furnace series reactors;
- Filter (tuning) reactor;
- Capacitor damping reactor;
- Capacitor discharge reactor;
- Grounding transformers (neutral couplers);
- Arc suppression coil;
- HVDC and industrial smoothing reactors.