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

GB/T 15544.3-2017

**Short-circuit current calculation in three-phase a.c. systems --
Part 3: Data of electrical equipment**

三相交流系统短路电流计算 第3部分：电气设备数据

(English Translation)

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Foreword

GB/T 15544 "three-phase AC system short-circuit current calculation" is divided into the following five sections.

--- Part 1. Current calculation;

--- Part 2. Short circuit current calculation and application of the coefficient;

--- Part 3. Electrical equipment data;

--- Part 4. Simultaneous two independent single-phase ground fault current and current through the earth;

--- Part 5. Example.

This section GB/T 15544 Part 3.

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

This section uses the translation method is equivalent to using IEC TR60909-2:2008 "Three-phase AC system short-circuit current calculation Part 2. Short circuit Current Calculation Applied Electrical Equipment Data ".

This section made the following editorial changes.

--- In line with the existing standard series, the name of this section was changed to "three-phase AC system short-circuit current calculation Part 3. Electrical equipment Prepare data".

This part is proposed by China Electricity Council.

This part of the national standardization of short-circuit current calculation Technical Committee (SAC/TC424) centralized.

1.1 Scope and objectives

This part of GB/T 15544 covers electrical equipment collected from different countries data, if necessary, can be used in accordance with GB/T 15544.1 into Short circuit current calculation.

The data for electrical equipment is usually provided by the manufacturer as a nameplate parameter or by the power supplier.

In some cases, these data may not be available. When the data given in this section consistent with the typical equipment of the user's country Then these data can be used to calculate the short-circuit current of the LV grid. This section collects data and its evaluation can be applied to medium pressure or high pressure the grid plan can also be used as a comparison with the equipment data provided by the equipment manufacturer or power supplier. For overhead lines and cables, somewhere in these cases, the electrical parameters can be calculated from the dimensions provided in this document based on their dimensions.

This section as a supplement to GB/T 15544.1, does not change the GB/T 15544.1 and GB/T 15544.4 gives standardized calculation Process.

1.2 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 15544.1-2013 Three-phase AC system short-circuit current calculation Part 1. Current calculation (IEC 60909-0:2001, IDT) GB/T 15544.4-2017 Three-phase AC system short-circuit current calculation Part 4. Simultaneous two independent single-phase ground fault Current and current through the earth (IEC 60909-3:2009, IDT)

2.1 Overview

This section provides the data in the calculation of short-circuit current is necessary. The data is given in the form of a curve or tabulation. Overhead lines and electricity the positive sequence of the cable and the zero-sequence short-circuit impedance can be calculated by

the formula.

A total of 15 National Committees (NCs) responded to the previous questionnaire in this section.

See Appendix A.

In some cases, the average or characteristic trend of electrical equipment data is based on the rating of the electrical equipment (eg, rated power, rated voltage, etc.) Function form is given.

2.2 Synchronous motor typical data

The characteristic parameters of the synchronous motor are listed in Table 1. Reactance is expressed in terms of per-unit basis with a reference value of $Z_{rG} = U^2 r_G / S r_G$ (see GB/T 15544.1) or Given as a percentage value.

Also given in Table 1 zero sequence reactance values, it is recommended to take $X(0)/X''_d = 0.5$.