ICS 17.220.01
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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 35698.2-2019

Calculation of effects of short-circuit currents -- Part 2: Examples of calculation

Issued on: June 4, 2019 **Implemented on: January 1, 2020**

Issued by: State Administration for Market Regulation, China National Standardization Administration

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Foreword

GB/T 35698 "Calculation of Short-Circuit Current Effect" is divided into two parts.

--- Part 1. Definition and calculation methods;

--- Part 2. Study.

This part is the second part of GB/T 35698.

This part uses the translation method equivalent to IEC TR60865-2.2015 "Short-circuit current effect calculation part 2. example".

This section has made the following editorial changes.

--- Modified the standard name.

1 Scope

This part of GB/T 35698 is part of the technical report of GB/T 35698, mainly showing short circuit according to GB/T 35698.1

The application process of flow mechanical effects and thermal effects calculations. Therefore, this part is supplemented by GB/T 35698.1 and does not affect GB/T 35698.1.

Standardized calculation process.

Pay special attention to the following points.

a) This part of the study explains how to perform calculations in a concise and understandable manner in accordance with GB/T 35698.1, rather than for verifying computer programs.

b) The number in parentheses in the end of the formula refers to the formula number in GB/T 35698.1-2017.

c) The system voltage is the indicator voltage.

d) The calculation results retain three significant figures.

e) The short circuit effect appears as a special load and is attached to the mechanical load of the normal operation of the switchgear. So some of the following

In the case of hard conductors, the possible static initial loads were also calculated. For normal operating loads and short-circuit loads,

Use a different safety factor. The values of these coefficients are typical values recommended for use. But depending on the safety concept adopted,

Other safety factors may be required.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply 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 35698.1-2017 Calculation of short-circuit current effects - Part 1. Definitions and calculation methods (IEC 60865-1.2011, IDT)

3 symbols and units

Symbols and units refer to GB/T 35698.1-2017.

In addition to this, the following symbols are used.

Fstr,k static load (eigenvalue) N

Fstr,d static load (design value) N

Fst, r, d Hard conductor bearing force due to static load (design value) N

Hs, hI insulator, height of the support member m

The horizontal component of the Hs lead wire at the lower fixed point.

Ik Steady-state short-circuit current (rms) according to GB/T 15544.1 A

Jst,m The second moment m4 of the main body section of the static load direction

Effective length of leff span m

Lf span shape factor m

Lh extension of the top support and clamp m