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

GB/T 38658-2020

**Guidance for the extension of validity of type tests of AC metal
enclosed switchgear and controlgear for rated voltages above
3.6 kV and up to and including 40.5 kV**

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Standardization Administration**

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard uses the redrafting method to modify and adopt IEC /T R62271-307..2015 "High Voltage Switchgear and Control Equipment Part 307

Points. Type test of AC metal enclosed and solid insulated enclosed switchgear and control equipment with rated voltage above 1kV and 52kV

"Extended Validity Guidelines."

Compared with IEC /T R62271-307..2015, this standard has structural adjustments. Change 1.1 of IEC /T R62271-307..2015

For "1 Scope", 1.2 was changed to "2 Normative Reference Documents", so that the subsequent article number was postponed.

The technical differences between this standard and IEC /T R62271-307..2015 and the reasons are as follows.

--- With regard to normative quotation documents, this standard has been adjusted with technical differences to suit China's technical conditions and adjustments

The situation is reflected in Chapter 2 "Regulatory Reference Documents", with specific adjustments as follows.

* Replace IEC 60050-441. 1984 and IEC 60050- with GB/T 2900.20-2016 which adopts international standards

441 1984/AMD1..2000;

* Replaced IEC 62271-200..2011 with GB/T 3906-2020, which was modified to adopt international standards;

* Replaced IEC 62271-1..2007 and IEC 62271-1 with GB/T 11022-2011 which adopts

international standards.

2007/AMD1..2011;

* Deleted IEC 62271-201..2014.

--- Deleted the solid insulated enclosed switchgear and control equipment that do not exist in China in Chapter 5 of IEC /T R62271-307..2015

Related extensions.

--- Deleted the extension criterion for the cross-sectional area of conductors in Article 5 of Table 7 of IEC /T R62271-307..2015.

This standard has made the following editorial changes.

--- To be consistent with China's technical standard system, the standard name was changed to "3.6kV ~ 40.5kV AC metal-enclosed switchgear and control

"Guidelines for the Validation of Type Testing of Manufacturing Equipment";

--- Adjust references.

This standard was proposed by the China Electrical Equipment Industry Association.

This standard is under the jurisdiction of the National High Voltage Switchgear Standardization Technical Committee (SAC/TC65).

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1 Scope

This standard specifies the application and extension of the effectiveness of the type test of 3.6kV ~ 40.5kV AC metal-enclosed switchgear and control equipment

Criteria and general methods for extending the validity of type tests.

This standard applies to AC metal-enclosed switchgear and rated voltage 3.6kV ~ 40.5kV as specified in GB/T 3906-2020 and

Control devices, and other devices in the same enclosure that may affect each other.

This standard applies to extending the validity of type tests performed on a sample with a set of determined ratings to the same family

Other complete switchgears with different ratings or different component arrangements.

Note. In order to carry out consistent conformity assessment and realize the optimization of type tests, this standard supports the composition of functional units of switchgear and control equipment of the same family

Selection of typical samples. This standard combines mature technical and physical principles, manufacturer and user experience and calculation to establish a type test

Extended guidelines for effectiveness to cover multiple designs and ratings.

2 Normative references

The following documents are essential for the application of this document. For dated references, only the dated version applies to this article

Pieces. For the cited documents without date, the latest version (including all amendments) applies to this document.

GB/T 2900.20-2016 Electrical engineering terminology high-voltage switchgear and control equipment (IEC 60050-441. 1984, MOD)

GB/T 3906-2020 3.6kV ~ 40.5kV AC metal-enclosed switchgear and control equipment (IEC 62271-200..2011, MOD)

GB/T 11022-2011 Common technical requirements for high-voltage switchgear and control equipment standards (IEC 62271-1..2007, MOD)

3 Terms and definitions

The terms and definitions defined in GB/T 2900.20-2016, GB/T 3906-2020 and GB/T 11022-2011 and the following apply

In this document. For ease of use, the following repeatedly lists some terms and GB/T 2900.20-2016 and GB/T 3906-2020

definition.

3.101

Switchgear and controlgear

The combination of switchgear and its related control, measurement, protection and regulation equipment, as well as the electrical connection between these devices and equipment

The general term for the assembly of connectors, accessories, shells and supports.

[GB/T 2900.20-2016, definition 3.1]

3.102

Assembly (of switchgear and controlgear)

A combination of switchgear and/or control equipment and all internal electrical and mechanical connections.

Note 1. The final assembly consists of one or more functional units.

Note 2. Rewrite GB/T 2900.20-2016, definition 4.1.