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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 2317.4-2023

Test method for electric power fittings - Part 4: Acceptance inspection

电力金具试验方法 第4部分：验收规则

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Standardization Administration of the PRC

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Foreword

This document was issued on 17 March 2023 by the State Administration for Market Regulation; Standardization Administration of the PRC and takes effect on 1 October 2023.

It is a GB/T standard: recommended rather than compulsory, but it is the text a Chinese reviewer applies when assessing a submission.

1 Scope

GB/T 2317.4-2023 covers the acceptance side of testing electric power fittings: the test items, the quantities to be tested, and the rules by which a result qualifies, for type tests, sampling tests and routine tests alike. The general technical conditions of the fittings themselves are taken from GB/T 2314 and the terms from GB/T 5075, so the text keeps to what is tested, on how many pieces, and what counts as a pass. Test requirements come first, dividing the work into those three categories and listing the items belonging to each; the acceptance rules follow, opening with the type test, whose purpose is to confirm the design performance of a fitting. Fittings are the small pieces that hold conductors, insulator strings and earth wires onto an overhead line, and agreeing in advance which pieces are proven by design test, which are covered by sampling and which are checked one by one is what keeps a consignment from being argued over after it arrives. Part 4 of the test method series. Of use to fittings manufacturers, transmission and distribution utilities, and inspection bodies handling delivery acceptance.

This Document stipulates the test items, quantities and qualification rules for type tests,

sampling tests and routine tests of electric power fittings.

This Document applies to electric power fittings (hereinafter referred to as "fittings") used in

10kV and above AC and DC overhead power lines, substations (converter stations) and power

distribution devices in power plant.

2 Normative References

The provisions in following documents become the essential provisions of this Document through reference in this Document. For the dated documents, only the versions with the dates indicated are applicable to this Document; for the undated documents, only the latest version (including all the amendments) is applicable to this Document.

GB/T 2314 General technical requirements for electric power fittings

GB/T 2317.1 Test method for electric power fittings - Part 1: Mechanical tests

GB/T 2317.2 Test method for electric power fittings - Part 2: Corona and RIV tests

GB/T 2317.3 Test method for electric power fittings - Part 3: Heat cycle tests

GB/T 4056 Ball and socket coupling dimensions of string insulator units

GB/T 5075 Terminology for electric power fittings

GB/T 35693 Technical specification for valve hall fittings of +/-800 kV ultra high voltage direct current (UHVDC) transmission project

DL/T 756 Link fittings

DL/T 763 Technical requirements for overhead line helical fittings

DL/T 765.2 Overhead distribution lines fittings-Part 2:Overhead conductor fittings of rated voltages up to 35kV

DL/T 765.3 Overhead distribution lines fittings - Part 3: Overhead insulated conductor fittings of rated voltages up to 35 kV

DL/T 768.7 Manufacture quality specification for electric power fittings hot dip galvanized coatings on fabricated iron and steel articles

DL/T 1098 Requirements and tests for overhead line spacers

DL/T 1099 Technical requirements and tests for damper

3 Terms and Definitions

For the purposes of this Document, the terms and definitions given in GB/T 5075 apply.

4 Test Requirements

4.1 The general technical conditions of the fittings shall comply with the provisions of GB/T 2314.

4.2 The fitting test is divided into type test, sampling test and routine test. The test items, quantity and requirements for link fittings, tension clamps, splicing fittings and protective fittings shall be carried out according to Table 1. The test items, quantity and requirements for draping clamps shall be carried out according to Table 2. The test items, quantity and requirements for spacer bars shall be carried out according to Table 3. The test items, quantities and requirements of anti-vibration hammer shall be carried out according to Table 4. The test items, quantity and requirements for electric substation fittings shall be carried out according to Table 5.

a) The valve hall fittings meet other test requirements specified in GB/T 35693;

b) Pre-twisted fittings meet other test requirements specified in DL/T 763;

c) Overhead bare conductor fittings with rated voltage 35kV and below meet other test requirements specified in DL/T 765.2;

d) Overhead insulated conductor fittings with rated voltage 35kV and below meet other test requirements specified in DL/T 765.3;

e) The balls and sockets connected by the ball and socket are inspected piece by piece for "pass" and "stop" gauges. The dimensions of the "pass" and "stop" gauges comply with the provisions of GB/T 4056.

5 Acceptance Rules

5.1 Type test

5.1.1 General requirements

The purpose of the type test is to confirm the design performance of the fittings. It is usually conducted once when the new product is trial-formulated. It shall be repeated when the design, material or process is changed.

5.1.2 The number of tests

The number of fitting tests shall meet the requirements in Tables 1 ~ 5.

5.1.3 Qualification judgment

If all the test pieces meet the requirements, then such product shall be qualified.

5.2 Sampling test

5.2.1 General requirements

The purpose of sampling testing is to verify the performance of materials and products. Sampling tests are conducted by batch; and test samples are randomly selected from the batches submitted for inspection. The purchaser has the right to select the samples to be tested and requires the manufacturer to provide a type test report.

5.2.2 The number of tests

When a batch of products is less than 100 pieces, sampling testing shall not be performed. When the batch size is 100 pieces or more, the sampling quantity is shown in Table 6.

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