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

GB/T 16927.3-2010

**High voltage test techniques -- Part 3: Definitions and
requirements for on-site testing**

高电压试验技术 第3部分：现场试验的定义及要求

(English Translation)

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Foreword

This section is based on the IEC 60060-3:2006 "High voltage test techniques - Part 3. Definitions and requirements for field tests" were developed of. This part of IEC 60060-3:2006 for the modification of the degree of consistency adoption.

This part of IEC 60060-3:2006 The main differences.

--- According to the provisions of GB/T 1.1-2009, the standard language of presentation and format has been modified;

--- Applicable voltage range, the highest voltage U_m is greater than 1kV device to the nominal voltage 3kV and above system equipment;

--- In 5.3.2, according to Chinese standards, is not recommended to use the internal calibrator, it removed the "internal or";

--- Note 2 in 6.4.3, the words "may be required at the rated voltage of the measuring current up to 0.5mA" to "rated voltage requirements Measuring the current as large as possible, should not be less than 0.1mA";

--- Appears in Note 7.3.1 and 10.3.1 in " $2 \pm 5\%$ ", does not match with the context, to " $2 \pm 15\%$ ";

--- Deleted 8.6.2 and 9.6.2 of the note "for descending performance insulating or

non-self-restoring insulation is recommended to use this test drive sequence";

--- Respectively 1, Fig. 2 a) in FIG. "T1/T 2 = 0.8/50 μ s" to "T1/T 2 = 0.8/40 μ s".

The chapters in this section, the order of the arrangement with the IEC 60060-3:2006 are basically the same, the contents of most of the provisions of the IEC 60060-3.

2006 same, except that the main difference has been given instructions.

This part is proposed by the China Electrical Equipment Industrial Association.

This part of the National high-voltage test technique and insulation with Standardization Technical Committee (SAC/TC163) centralized.

Introduction

Because the field test is different from the factory and laboratory tests will be subject to a variety of external factors such as an external electric and magnetic fields, weather conditions, etc.

Effects, therefore, usually at the site during the test can not be achieved GB/T 16927.1 GB/T 16927.2 and the requirements set.

Site high-voltage test applies to.

--- Tolerance test as part of the equipment on-site handover procedure, the purpose is to prove that equipment from the factory to the field of transportation and now Field installation meet the technical requirements of the manufacturer;

--- After tolerance test site maintenance, the purpose is to prove that the device has been repaired, and the description of the device status has been fit to resume operation;

--- Test for diagnostic purposes, such as partial discharge measurements, the purpose is to prove dangerous equipment insulation defect does not exist and, as expected Life indications.

High voltage test techniques Part 3. Definition and field test requirements

1 Scope

The following applies to field test voltage and operating state test GB/T 16927 in this section, and with the GB/T 16927.1 related.

---DC voltage;

---AC voltage;

--- Non-oscillation or oscillation type lightning impulse voltage;

--- Non-oscillation or oscillation type switching impulse voltage.

For special tests, using the following voltage.

--- Ultra low frequency voltage;

--- Attenuated AC voltage.

This section applies to a nominal voltage of 3kV and above devices in the system. By the relevant Technical Committee is responsible for selecting appliances, equipment and field test voltage facilities, test procedures and test voltage level. On-site test voltage and described in this section of the different special circumstances Situation, can be specified by the relevant technical committees.

Note 1: The effect of different voltage waveforms listed above on the test (insulation) provides is not the same.

Note 2: The test voltage-level selection should take into account the uncertainty of larger tolerances and measurements.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB 311.1-1997 high voltage transmission and distribution equipment insulation coordination (neq IEC 60071-1:1993) GB/T 2900.19-1994 Electrotechnical term high voltage test technique and insulation coordination (neq IEC 60071-1:1993) GB/T 16927.1-1997 high voltage test techniques Part 1. General test requirements (eqvIEC 60060-1. 1989) GB/T 16927.2-1997 high voltage test techniques Part 2. Measuring systems (eqvIEC 60060-2.1994)

3 Terms and Definitions

The following terms and definitions apply to this document. All other definitions and test procedures relating to see GB/T 16927.1 and GB/T 16927.2.

Field test on-sitetest Test to be tested appliances, equipment and facility locations, but should as far as possible consistent with the equipment running.

Impulse voltage Non-oscillatory or oscillatory transients deliberately applied voltage is usually fast rise to the peak voltage, which is then reduced to a slower envelope Zero.