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

GB/T 10065-2007

Replacing GB/T 10065-1988

**Gassing of insulating liquids under electrical stress and
ionization**

绝缘液体在电应力和电离作用下的析气性测定方法

(English Translation)

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Foreword

This revised standard adopts IEC 60628. 1985 "method of insulating liquids under electrical stress and ionization gassing Determination" (in English).

For ease of use, this standard made the following changes.

- a) use the decimal symbol '. 'Decimal symbol instead of ' ';
- b) The "ISO 683/XIII" to "ISO 683/13";
- c) increase the "Normative references" chapter;
- d) increase the number of the standard clauses and IEC 60628. 1985 reg number table, see Appendix A.

This standard replaces GB/T 10065-1988 "Determination method gassing insulating liquids under electrical stress and ionization." this standard 10065-1988 major changes compared to GB/T as follows.

- a) increase the "Normative references" chapter;
- b) increase the IEC 60628. method A 1985;
- c) an increase of 1, 2 and 7, labeled A, C, D, E, F.

Appendix A of this standard is an informative annex.

The standard proposed by China Electrical Equipment Industrial Association.

This standard by the National Standardization Technical Committee of the insulating material (SAC/TC51) centralized.

This standard was drafted. Guilin Institute of Electrical Science.

1 Scope

This standard specifies two each using different instruments measuring the insulation resistance of the liquid gassing method. In the gassing chamber with special geometry Applied on a sufficiently high electrical stress so that the interior of the oil - gas discharge occurs at the interface of gas in the discharge action, or measure the insulating liquid release Absorption trend gases.

The method specified in this standard applies to the determination of commodity oil specifications and selection of the insulating liquid, and also applies to product development and quality Guarantee Note. Due to the use of high voltage, hydrogen and solvent, it should be noted that the relevant national safety regulations.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

ISO 383 Laboratory glassware interchangeable cone mill Interface ISO 653. 1980 Precision long stick thermometer ISO 683 heat-treated steels, alloy steels and steel cut ISO 4803. 1978 laboratory glassware borosilicate glass

3 General Description

3.1

Both of these methods is an insulating liquid under test conditions is to absorb or release gas, any kind of insulating liquid mainly gassing it is related to the chemical characteristics, but changing some parameters in the test can significantly alter the test results.

3.2

Both methods can be carried out in the gas phase under different conditions, temperature and electric field strength. In order to develop a unified testing standards, regulations Specific test conditions, the majority of these conditions represent the electrical equipment in the liquid medium may produce free discharge.

At present, although it is generally believed that inspiratory impregnating agent does have the free under a high electric field is impregnated insulation system for minimizing the discharge Use, but can not determine a correlation between test results and the gassing of electrical equipment operating characteristics. Therefore, if the description of the test results with the expected the relationship between applications, then takes another technical

judgment.

Both test methods 3.3 design, originally used to determine the characteristics of the speed range gassing mineral insulating liquid. For other liquids, The size gassing chamber may need to do some modifications.

A fourth method

4.1 Summary of Method

The method for determining trends in the insulating liquid gassing under a hydrogen atmosphere, in order to test in a shorter period of gassing rate to show the results.

In one particular small room, after the insulating liquid hydrogen and liquid hydrogen on dry saturated after it under the following test conditions Applying a radial electric stress.

- a) Voltage. 10kV;
- b) Frequency. 50Hz or 60Hz;
- c) Temperature. 80 °C;